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CENTER FOR ENERGY & ENVIRONMENTAL SECURITY
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THE BOUNDARIES OF EXECUTIVE AUTHORITY

An Evaluation of Priority Proposals from the Presidential Climate Action Plan

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The Boundaries of Executive Authority:

An Evaluation of Priority Proposals from the Presidential Climate Action Plan

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I. Introduction

This report is a follow-up to a previous report issued by the Center for Energy and Environmental Security (CEES) in February 2008, *The Boundaries of Executive Authority: Using Executive Orders to Implement Federal Climate Change Policy*.[1] In that report we summarized and brought together in one place the most applicable guidance on the legal boundaries of executive authority, with a focus on the use of executive orders to implement appropriate provisions of the Presidential Climate Action Plan. The Presidential Climate Action Plan, developed by the Presidential Climate Action Project (PCAP), is a comprehensive action plan to address climate change nationally and is the result of combined expertise of respected groups and individuals from around the country who are from science, policy, legal and other backgrounds.[2]

The *PCAP Report* transforms policies into action items that can be taken at the federal level by, for example, Congress or the President to address climate change. PCAP has identified specific action items from their national plan as priorities which we will refer to as proposals. These serve as examples of the actions the next President can take to address climate change. In this report, CEES evaluates implementation of each of these priority proposals by executive order or other executive directive by identifying the relevant legal authority or authorities that are applicable to each specific proposal, analyzing these authorities, and then evaluating each proposal in terms of implementation by executive directive based on an assessment of a number of factors which are described below.

The *Boundaries Report* delineates the authority of the President to use executive directives in general terms and also addresses topics of special interest to climate action policy, such as regulating greenhouse gas emissions (GHGs) under the Clean Air Act and supporting climate mitigation through federal procurement. The legal analysis included in the *Boundaries Report* will be referenced where applicable but not repeated in this report. The two reports should be considered together as companion reports.

Throughout this report *The Boundaries of Executive Authority: Using Executive Orders to Implement Federal Climate Change Policy* will be referenced as the "*Boundaries Report*" and the *Presidential Climate Action Plan* will be referenced as the "*PCAP Report."*

A. Overview of Report

This report begins with a summary of the general authority to address climate change. Chapter II includes an analysis of federal statutes, executive directives (executive orders and proclamations only), and treaties (primarily the United Nations Framework Convention on Climate Change) that explicitly address global warming, climate change or greenhouse gases. Section II includes an evaluation of each specific priority proposal. The proposals are grouped into six sections as

[1] *The Boundaries Report*, commissioned by the Presidential Climate Action Project, is available at http://www.colorado.edu/law/eesi/Boundaries_Executive_Authority.pdf.
[2] *The Presidential Climate Action Plan* is available at http://www.climateactionproject.com/index.php.

designated by PCAP: (A) Establishing National Energy and Carbon Goals; (B) Mobilizing Agencies for Carbon Mitigation; (C) Improving Federal Stewardship; (D) Protecting American Taxpayers from Liability; (E) Mobilizing the Marketplace; and (F) Mobilizing America for Climate Protection (largely the establishment of committees, task forces and the like). The layout of the analysis for each PCAP proposal on the priority list is as follows:

1) Proposal in summary form from PCAP's priority list (in text box).
2) Relevant section of the *PCAP Report* (in italics).
3) Background.
4) Statutes: provisions that grant specific authority for the act, general authority for the act, imply congressional support in the aggregate, or directly or impliedly prohibit action by executive directive.[3]
5) Authority over the Agency: the entity to which the order is directed is evaluated in terms of its independence from executive control.
6) Executive Orders: those that exemplify prior executive action directly on point, are generally applicable, or are parallel in some manner.
7) Conclusions: in some cases this may include suggestions for re-framing the proposal (usually in cases where the PCAP proposal is not a good candidate for executive action as it is proposed), or a suggested alternative form of directive (i.e., proclamation, memorandum, or national security directive).[4]

Section IV concludes the report with some observations and a table summarizing the proposal evaluations.

B. The Evaluation Process

To begin the analysis, the basis of authority to issue an executive directive, such as an executive order, is the U.S. Constitution or a congressional delegation.[5] "The President's power, if any, to issue the order must stem either from an act of Congress or from the Constitution itself."[6] Unless otherwise indicated, we begin with the following general authority for executive action from the U.S. Constitution for each of the proposals:[7]

- The executive power shall be vested in a President of the United States of America. Art. II, Sect. 1. (The President is the Chief Executive.)

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[3] If there are constitutional provisions relevant to the analysis that differ from the four primary constitutional provisions discussed in part B of this section they are included in this section of the proposal analysis.

[4] The key issue is whether the President has the authority to take the action by executive directive. There are no hard and fast rules in regard to the form of the executive directive, although historically there are some accepted/preferred practices. See, Boundaries Report, Chapter II.

[5] Boundaries Report, Chapter III(A), (B)(1)(a).

[6] *Medellin v. Texas*, 2008 WL 762522, *19 (U.S. March 25, 2008), *citing Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579, 585 (1952), ("The President's authority to act must stem either from an act of Congress or from the Constitution itself.")

[7] All of the priority proposals are domestic policy.

- The President shall preserve, protect and defend the Constitution of the United States. Art. II, Sect. 1.

- The President shall take care that the laws be faithfully executed. Art. II, Sect. 3.

- The President may require the written opinion of the principal officer in each of the executive departments. Art. II, sect. 2.

As set forth in the *Boundaries Report* a variety of factors impact the evaluation.[8] Key, however, is the balance of power between the executive and legislative branches and the relationship of the directive to congressional intent. The analysis of the specific proposals in this report will usually center on the "will of Congress," that is, relevant legislation that explicitly authorizes the action, supports the action in some other manner, or directly or impliedly prohibits the action. In addition, past executive orders are reviewed. Unchallenged or unopposed by Congress, historical executive action can be an indicator of congressional acquiescence and an accepted use of executive authority.[9] Also, for orders issued to government agencies, consideration of the type of agency must be included in the analysis. Different agencies are subject to different levels of executive control.[10]

The evaluation of each proposal is based on balancing the various factors that impact the legality and legitimacy of executive authority.[11] These factors include the following:

(1) Constitutional Authority.

(2) Statutory Delegations:
   a. Whether it is specifically delegated to the President or is designated to an agency;
   b. How specific the delegation is to the action being taken and how broad the authority is;
   c. How closely prior application of the delegation is related to the action in the proposal.

(3) Other relevant legislation on the subject matter: whether it supports or restricts the proposed action.

(4) Type of agency subject to the directive:[12]
   a. Executive Office of the President (EOP);
   b. Executive Department;
   c. Not Executive Department and not Independent;
   d. Independent: by attribute or by statutory delegation.

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[8] Boundaries Report, Chapter II(A)(1), (B)(1)(a).
[9] Boundaries Report, Chapter III(A)(2)(a), V(B)(2)(c), IX(3).
[10] Boundaries Report, Chapter VI.
[11] Boundaries Report, Chapter III (especially section A).
[12] Boundaries Report, Chapter VI (especially section 1).

(5) Prior Executive Orders: assessment of congressional acquiescence and accepted historical practice.

(6) Subject matter of proposal:
   a. Management or operations of federal government (e.g., addressing federal property, employees or operations);
   b. Substantive regulatory policy.

C. Philosophy on Executive Authority

A significant factor in evaluating the legitimacy of executive orders directing agency action is the approach to executive authority that is applied. That is, the legitimacy of an executive order is heavily influenced by our understanding of the role of the President in regard to his or her authority over agencies. This role is viewed by some to be limited to that of oversight and by others as much more far reaching. One legal scholar describes the far reaching President as "the decider."[13] Although the courts have placed some limits on executive authority, there are no hard and fast rules and when challenges are made the court rulings in this area are very contextual; the determination is very dependent on the details of the case and the rulings issued are uniformly narrow in scope.[14] Although court opinions provide some guidance as to the boundaries of the President's authority over agencies, there is no legal precedent conclusively deciding the matter in a general manner and there are varying opinions among legal experts. While staying within the legal boundaries established by court opinions, the philosophy adopted will still have a significant impact on the ultimate conclusion regarding the legitimacy of an executive action.

A general analysis of executive authority based on an extensive review of case law is the subject matter of Chapter III of the Boundaries Report. One of the key conclusions of that analysis is that when the President acts pursuant to an authorization of Congress his authority is at its maximum. An authorization typically refers to a statutory delegation. When the delegation is explicitly to the President, ownership of the authority is clear. A large part of the debate over presidential authority, however, is based on the legal significance of statutory delegations directly to agencies or their heads rather than to the President. This is a key difference in approaches regarding the President's authority over agencies. The range of approaches (and understandings) is the subject matter of Chapter VI (especially section 4) of the Boundaries Report. Three of the approaches representing various positions on the spectrum are summarized here.[15]

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[13] See Peter L. Strauss, *Overseer, or "The Decider"? The President in Administrative Law*, 75 Geo. Wash. L. Rev. 696 (2007).

[14] See Boundaries Report, Chapter III.

[15] In addition to Chapter VI of the Boundaries Report, this summary draws largely from three journal articles: 1) Elena Kagan, Presidential Administration, 114 Harv. L. Rev. 2245 (2001); and 2) Strauss, *Overseer, or "The Decider"? supra*; Peter L. Strauss, *The Place of Agencies in Government: Separation of Powers and the Fourth Branch,* 84 Colum. L. Rev. 573 (1984).

1. Procedural Supervisory Authority over Administrative Officers

This enables the President to demand information from, and engage in consultation with, agencies and their officers. This applies to all executive agencies across the board and would include, for example, the OMB-OIRA review of regulatory actions[16] and demanding reports on various issues, even reports that suggest a preferred policy position.[17] At the most conservative end of this approach, and the conventional view in administrative law, is the position that the President lacks the power to direct an agency official to take designated actions within the sphere of that official's delegated discretion. An official's delegated discretion would come in the form of a specific delegation from Congress to the agency (rather than to the President), for example.[18] This position is based on the argument that a delegation to an agency head represents congressional intent to insulate agency discretion from the President. Thus, the President is prohibited from commanding an agency to act in this area of discretion and this limitation extends to all agencies.[19]

2. Directive Authority

An intermediate position is based on a distinction between independent and other executive agencies. Pursuant to this approach, delegations directly to independent agencies are intended to insulate agency discretion from the President; however, delegations directly to other executive agencies imply a delegation to the President as well.[20] Thus, for executive agencies that are not independent, the President can direct administrative officials in the use of the delegated authority. This position is based in part on the understanding that "Congress knows that executive officials stand in all other respects in a subordinate position to the President, given that the President nominates them without restriction, can remove them at will and can subject them to potentially far ranging oversight."[21] The Clinton administration is associated with the "directive authority" approach, which includes commands to executive branch officials to take specific actions within their statutorily delegated discretion. Pursuant to this approach, the Clinton White House to a significant extent set the administrative agenda for key agencies, heavily influencing what they would (or would not) spend time on and what they would (or would not) generate as regulatory product.[22]

This approach differs in two key respects from the unitary approach, described below: 1) independent agencies are given differential treatment; and 2) this approach tempers executive authority over duties delegated directly to agencies. One example of this tempered authority is that given a delegation directly to an agency the President only has the authority to oversee the agencies' decision processes pursuant to the directive approach, while the President has the authority to decide these matters pursuant to the unitary approach.

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[16] See Boundaries Report Chapter VI(3); *see also*, e.g., Exec. Order No. 12291 (1981), 12498, 12866 (1993).
[17] Kagan, *supra* at 2323-24.
[18] *Id.* at 2323-24.
[19] *Id.*
[20] *Id.* at 2326-28.
[21] *Id.* at 2327.
[22] *Id.* at 2248.

3. The Unitary Executive

This is described as "a system in which all of what now counts as administrative activity is controllable by the President."[23] Under this doctrine it is presumed that a delegation directly to an agency implies a delegation to the President as well. That is, the President has plenary control over all heads of agencies involved in executing, implementing or administering federal law and the President can direct agency officials as to the exercise of this delegated authority. This authority extends to all executive agencies including independent agencies.[24]

Under this approach, the President has the power to direct the manner in which subordinate officials in all agencies exercise discretionary executive power and the power to veto or nullify such officials' exercises of discretionary executive power. It is based in part on the position that, although Congress creates duties, the President has the responsibility to fulfill them.

4. Approach Applied: Modified Procedural Authority

For the analysis in this report we applied a modified procedural approach which captures all of the authority in the first category and some aspects of the second. If the three approaches described above are visualized as a spectrum, this approach would fall somewhere between procedural and directive authority, encompassing all of the authority within procedural and some of that within directive. This approach is somewhat more limited than that of the Clinton Administration, and significantly more limited than that taken by the current administration. The following are some examples of how this approach translates into exercising executive authority:

- The President has the authority to demand information from and engage in consultation with agencies and their officers.

- The President has the authority to coordinate government operations. Congress has provided for coordination by the President (or agencies reporting directly to him) across a wide range of governmental activities, for example, budget proposals, property and acquisitions management, paperwork requirements, analyses of the environmental and economic impacts of government actions and litigation.[25] Further, the President can use executive orders to create supplementary coordinating regimes and constitute working groups to develop government-wide initiatives on various policies.[26]

- The President has the authority to supervise and guide agencies in the performance of their duties. Agencies have a duty to consult with the President on these matters.[27] This falls short of making determinations or findings for the agency that have been placed with the agency by statute.

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[23] Kagan, *supra* at 2247.
[24] *Id.* at 2325, 27.
[25] Strauss, *Overseer or "The Decider," supra* at 717.
[26] *See id.* at 718.
[27] *See id.* at 737-38 ("The President's prerogatives are to consult with them [agency heads] about their performance of those duties, explicitly, and to replace them (with required, and thus politically expensive, senatorial confirmation

- The President shall not substitute his judgment for that of an agency regarding the discharge of a duty assigned by statute directly to the agency. "The congressionally specified decision maker, where she is not the President, operates at the head of a professionally staffed agency, charged with decision (and explanation of decision) in accordance with stated and generally transparent procedures and a particular statutory framework."[28] Agencies have technical expertise that should be applied to determinations or findings and, to the extent possible, these determinations and findings should be based on expertise rather than politics.[29] Agencies, however, do not operate in a vacuum. They operate under the guidance and policy established by the President and Congress. Thus, under this approach the President cannot dictate regulatory outcomes; however, the President can recommend the consideration of certain regulatory alternatives or place priority on certain programs or regulations through authority he has in planning or establishing policy. Further, the President has the authority to demand that an agency perform its congressionally delegated duties, that is, move forward on making a determination or finding, but cannot dictate what the determination or finding will be (see Proposal B-7 regarding regulation of pollutants under the Clean Air Act).

- The President's supervisory and oversight authority is much more limited over independent agencies.

- The President's supervisory and oversight authority is much broader over agencies placed directly under his control (e.g., established in the Executive Office of the President, or with the statutory duty to operate under the direction or supervision of the President).

The selection of the above-described approach is not a judgment as to the legality of the other approaches. As previously stated, there is no legal precedent mandating this position and presidents have taken different approaches. The application of a different philosophy would affect the conclusions in this report. For example, under the directive or unitary approach in most cases the conclusion would come out stronger in favor of presidential authority. However, executive authority is more firmly established if it falls at the moderate end of the spectrum.

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of their replacement) when their performance of their duties persuades him that he must do so implicitly. . . . [T]he heads of departments the President appoints and the Senate confirms have the responsibility to decide the issues Congress has committed to their care—after appropriate consultation, to be sure—and not simply to obey.").

[28] *Id.* at 713.

[29] *Id*. (The rationale of the administrative state is to obtain reasoned decision making and application of expert judgment.)

II. The President's General Authority to Address Climate Change and the Reduction of GHG Emissions

The following is a summary of relevant congressional action (statutes), executive action (executive orders and proclamations only), and treaty authority (largely the UNFCCC) relevant to the President's general authority to address climate change. Although the ultimate assessment of each PCAP proposal for presidential action requires analysis of the specifics of each proposal, this section provides the background and general authority for executive action in this area.

A. Statutes

There are 96 statutory provisions in the U.S. Code that explicitly address climate change, global warming or greenhouse gases (GHGs).[30] Appendix A provides a compilation of these 96 provisions and includes an excerpt from each provision which encapsulates only that portion of the statute in which climate change, global warming or greenhouse gases is mentioned. In a few cases an explanatory note is provided in brackets ("[]") to give context to the excerpt.

These provisions span 11 titles of the U.S. Code including: Agriculture, Armed Forces, Commerce and Trade, Conservation, Education, Foreign Relations and Intercourse, Indians, Internal Revenue Code, Labor, Public Health and Welfare, and Transportation. These provisions span a broad array of activities and subject matter including, for example, building codes; marine research and studies; coastal zone research and studies; climate research; federal government conservation activities; federal government procurement practices; policy development and planning; research and development, grants, loans and other support to various entities such as small businesses, state and local development companies, and Indian tribes; electric utility standards; forestry management practices; tax credits; air pollution prevention and control; energy security, independence, and conservation; promoting the use and development of alternative energy sources; research, development and deployment of alternative energy technology; and more.

The statutes in Appendix A represent only those provisions that explicitly address climate change, global warming or GHGs. They do not include statutes that are otherwise relevant and applicable to climate change policy. For example, the Clean Air Act (CAA) is the primary vehicle for regulation of air pollutants.[31] The statute does not explicitly mention climate change, global warming or GHGs; however, based on a 2007 Supreme Court decision and a recent executive announcement it will be used to regulate GHG emissions.[32] Only two sections of Title

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[30] This is based on a search of the U.S. Code for the terms "climate change," "global warming" and "GHG" valid as of April 9, 2008.

[31] 42 U.S.C. §§ 7410-7627.

[32] *Massachusetts v. U.S. Environmental Protection Agency (EPA)*, 127 S.Ct. 1438 (2007) (GHGs are pollutants under the CAA); Charlie Savage and Robert Pear, *White House Sets a June Deadline to Propose Rules*, N.Y. Times, May 31, 2008, at A1 (White House chief of staff issues an executive directive in the form of a memorandum for the EPA to limit GHG emissions as a pollutant under the CAA, as the Supreme Court ordered the agency to consider in 2007. "The agency has said its next step will be to invite public suggestions about what any rule should require.") See also, Proposal B-7; Boundaries Report, Chapter VI.

42, Chapter 77, Subchapter III explicitly address GHGs; however, the entire Subchapter (Parts A through H) which concerns improving energy efficiency is a GHG reduction strategy. The same can be said for Chapter 91 of Title 42 concerning national energy conservation policy. Only one specific provision explicitly refers to GHG emissions but the vast majority of the chapter (composed of seven subchapters) is relevant to climate change policy. There are numerous other examples throughout the U.S. Code. The point of highlighting the provisions in Appendix A is to show that climate change has explicitly been a U.S. policy issue expressed by Congress in the U.S. Code since at least 1978,[33] and over the last three decades has increased in significance as a federal policy concern, evidenced by continued congressional action.

Some of these provisions delegate authority specifically to the President, such as 15 U.S.C. § 2904 which delegates to the President the authority to establish the National Climate Program discussed below, while others designate agency responsibility. For example, 7 U.S.C. § 6701 directs the Secretary of Agriculture to establish a Global Climate Change Program within the Department of Agriculture. While some of these provisions are aspects of other programs or projects,[34] some are comprehensive chapters and subchapters devoted to climate change.

In terms of setting climate change policy and organizing and managing federal agencies to implement this policy, the President has substantial authority. The following is a summary of some of the more substantial statutory provisions addressing climate change including some key provisions in terms of delegations of authority.

National Energy Policy

Pursuant to 42 U.S.C. § 7321, the President shall prepare and submit to Congress a proposed National Energy Policy Plan (NEPP) and report beginning in 1979, and biennially thereafter.[35]

Title 42 The Public Health and Welfare, Chapter 134 Energy Policy, Subchapter VII Global Climate Change.[36]

This subchapter was enacted as Title XVI of the 1992 Energy Policy Act. It directs the Department of Energy (DOE) to undertake a number of activities related to climate change consistent with the agency's mission, such as assessing alternative policy mechanisms for addressing GHG emissions, developing a national inventory and system for voluntary reporting of GHG emissions, developing an inventory of GHG intensity reducing technologies, developing policies to encourage exportation of energy resource technologies to developing countries, and establishing the Climate Change Technology Advisory Committee and supporting the Committee.

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[33] The National Climate Program Act was passed on September 17, 1978. Pub. L. No. 95-367, 92 Stat. 601, codified at 15 U.S.C. §§ 2901- 2908. Research for this report did not include enactment dates of all the provisions in Appendix A, therefore, it is possible one or more could have been enacted earlier.
[34] See, e.g., 20 U.S.C. § 5501.
[35] The Report is reviewed by the appropriate congressional committees and, if deemed necessary, legislation may be proposed which may contain alternatives to, modifications of, or additions to the proposed Plan submitted by the President. 42 U.S.C. § 7322.
[36] Codified at 42 U.S.C. §§ 13381-13389.

The Secretary of Energy was required to submit a report to Congress on Global Climate Change (GCC Report) by Oct 24, 1994.[37] Beginning in 1993, the NEPP prepared by the President shall include a least-cost energy strategy (LCES). The LCES is prepared by the Secretary of Energy and shall take into account the GCC Report.[38]

Title 15 Commerce and Trade, Chapter 56 National Climate Program (NCP), the National Climate Program Act of 1978.[39]

The purpose of this chapter is to establish a national climate program that will assist the nation and the world to understand and respond to natural and man-induced climate processes and their implications. It largely addresses better methods for data collection, research and dissemination of information. The first program element is assessment of the effect of climate on the natural environment, agricultural production, energy supply and demand, land and water resources, transportation, human health and national security. Where appropriate, such assessments may include recommendations for action.[40]

This Act delegates a significant amount of authority directly to the President. The President shall establish the program, promulgate 5-year plans, define the roles of federal officers and provide for program coordination.[41] The Secretary of Commerce serves as the lead entity for administering the program.[42]

The first 5-year plan was submitted to Congress in late 1978 (final September 1979). The plan shall be revised and extended at least once every 4 years thereafter.[43] The Secretary of Commerce shall establish and maintain an Interagency Climate Program Policy board and submit an annual report to Congress regarding activities conducted pursuant to the NCP.[44]

Title 15 Commerce and Trade, Chapter 56 National Climate Program, Note to § 2901, the Global Climate Protection Act of 1987.[45]

This Act recognizes evidence that links manmade pollution with global warming and the implications of an increased Earth temperature. It sets U.S. policy to address global warming and directs the Secretary of State to coordinate U.S. policy in the international arena.

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[37] 42 USC § 13381. This reporting requirement was terminated on May 15, 2000. 42 U.S.C. § 7331 Note (For termination of reporting provisions of this section, effective May 15, 2000, see Pub. L. No. 104-66, § 3003, as amended, set out as a note under 31 U.S.C.A. § 1113, and the 12th item on page 87 of House Document No. 103-7.).
[38] 42 U.S.C. § 13382(a).
[39] 15 U.S.C. §§ 2901-2908.
[40] *Id.* at § 2904(d).
[41] *Id.* at § 2904(a),(b).
[42] *Id.* at § 2904(c)(2)(A).
[43] *Id.* at § 2904(d)(9).
[44] *Id.* at. §§ 2904(e), 2906.
[45] Although this Act is published as a Note to a section of the National Climate Program Act, the provisions included in the Note have the full force and effect of U.S. federal statutory law. There is no difference, legally, in this Note and provisions that are published directly into a section of the U.S. Code. Raymond Kaselonis, U.S. Office of Law Revision Council (May 30, 2008).

In addition, it delegates to the President significant authority for establishing policy in this area. "The President, through the Environmental Protection Agency shall be responsible for developing and proposing to Congress a coordinated national policy on global climate change."[46]

Title 15 Commerce and Trade, Chapter 56a Global Change Research.[47]

The purpose of this chapter is "to provide for development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change."[48]

This chapter delegates substantial authority directly to the President. The President, through the Federal Coordinating Council on Science, Engineering and Technology ("the Council"), shall establish a Committee on Earth and Environmental Sciences ("the Committee"). The Committee shall carry out council functions relating to global change research.[49] The chairperson of the Committee is selected by the Committee.[50]

The President shall establish an interagency U.S. Global Change Research Program (GCRP); it will be implemented by the National Global Change Research Plan (NGCRP or Plan) developed under § 2934.[51] The Council, through the Committee, develops the Plan. The Plan shall contain recommendations for national global change research. The Council shall submit the Plan to Congress in November 1990 and shall revise it at least once every 3 years thereafter.[52] In developing the Plan the Committee shall consult with academic, State, industry, and environmental groups and representatives.[53] The National Research Council evaluates the scientific content of Plan.[54]

The Committee shall prepare an assessment for the President and Congress interpreting findings of the GCRP no less than every four years.[55] The President, the Council, and the Secretary of Commerce shall ensure that activities of the NCP (discussed above) are considered in developing national global change research efforts.[56] Research findings shall be made available to the EPA and all federal agencies for use in formulation of coordinated policies.[57]

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[46] 15 U.S.C. § 2901 Note, § 1103(b). See also, 15 U.S.C. § 2938(b)(1).
[47] *Id.* at. §§ 2921-2961.
[48] *Id.* at. § 2931(b).
[49] 42 U.S.C. § 6651.
[50] 15 U.S.C. § 2932(c).
[51] *Id.* at § 2933.
[52] *Id.* at § 2934(a).
[53] *Id.* at § 2934(f).
[54] *Id.* at § 2934(e).
[55] *Id.* at § 2936.
[56] *Id.* at § 2938 (a).
[57] *Id.* at § 2938 (b).

Title 7 Agriculture, Chapter 96 Global Climate Change.[58]

This chapter establishes the Global Climate Change Program within the U.S. Department of Agriculture (USDA) as a "focal point for coordinating all issues of climate change."[59] This chapter also charges the USDA with a number of responsibilities consistent with the agency's mission, for example, studying the effects of global climate change on agriculture and forestry; the means of mitigating the effects of global climate change on crops of economic significance; and the emissions of methane, nitrous oxide, and hydrocarbons from tropical and temperate forests.[60] Further, the USDA shall establish an office of international forestry and undertake demonstration projects in urban forestry and biomass energy.

B. Executive Orders

There are five executive orders that explicitly address global warming, climate change or GHGs:

1) E.O. 13123, June 3, 1999: Greening the Government through Efficient Energy Management.
2) E.O. 13134, August 12, 1999: Developing and Promoting Biobased Products and Bioenergy.
3) E.O. 13149, April 12, 2000: Greening the Government through Federal Fleet and Transportation Efficiency.
4) E.O. 13423, January 24, 2007: Strengthening Federal Environmental, Energy, and Transportation Management.
5) E.O. 13432, May 14, 2007: Cooperation Among Agencies in Protecting the Environment With Respect to GHG Emissions From Motor Vehicles, Nonroad Vehicles, and Nonroad Engines.

Each of these executive orders is substantial in its content. For example, E.O. 13423, 13123 and 13249 are comprehensive directives that include a statement of national policy, specific targets and goals, and specific duties for the relevant agencies to implement the orders. E.O. 13134 includes a statement of national policy and undertakes to develop a comprehensive national strategy. E.O. 13432 establishes a national policy and directs the coordination of agency actions in regard to this policy. Again, these are the executive orders that explicitly address global warming, climate change or GHGs. There are numerous other executive orders relevant to climate change policy, such as executive orders concerning energy efficiency, energy security, energy conservation, alternative sources of energy and the like, but the point here is that for almost a decade climate change has explicitly been the subject matter of executive orders.

[58] 7 U.S.C. §§ 6701-6711.
[59] *Id.* at § 6701(a).
[60] *Id.* at § 6702.

C. Presidential Proclamations

There are 17 presidential proclamations that explicitly address global warming, climate change or GHGs. They range from George Bush's Earth Day Proclamation issued January 30, 1990 (Proc. 6085) through George W. Bush's Recycle Day Proclamation issued November 15, 2007 (Proc. 8203). All but one proclaims or establishes a day, week or month for national recognition and to promote some activity or goal nationally, e.g. World Fisheries Day, National Alternatives Fuel Week. Proclamation 6920, issued September 18, 1996, establishes the Grand Staircase-Escalante National Monument, and as partial support that this parcel is an object of "historic or scientific interest" notes a feature of the land that would provide "insight into the vegetation and climate of the past 25,000 years and furnishes context for studies of evolution and climate change."

Appendix B is a compilation of these proclamations. It includes an excerpt from each proclamation with some notable language. The following is an example of the language from Proclamation 6085, Earth Day, issued by President Bush on Jan. 3, 1990:

> "Tremendous progress has been made during the past 20 years in addressing environmental problems, yet great challenges remain. Many scientists are concerned that a buildup of certain gases in the atmosphere may cause significant climate changes with serious, widespread consequences, and there is growing evidence that the stratospheric ozone layer is gradually being depleted. . . . That is why, as we welcome the promise of a new decade, we must strengthen and renew our commitment to environmental protection. . . . The United States has also been a leader in the worldwide effort to study and address global climate change. Through our participation in the Intergovernmental Panel on Climate Change, we are working to promote environmental safeguards not only at home but also abroad. Today we vow to press on with this vital work. On the day he signed the National Environmental Policy Act, President Nixon said the 1970s "must be the years when America pays its debt to the past by reclaiming the purity of its air, its waters, and our living environment." Today I say the 1990s must be the years when we not only pay our debt to the past, but also fulfill our obligation to protect this earthly home for generations yet unborn.

D. Treaties

Although the U.S. is a party to a number of bilateral and small multi-lateral international agreements relevant to climate change, the most relevant treaty is the United Nations Framework Convention on Climate Change (UNFCCC or "the Convention"). The UNFCCC was ratified by

the U.S. and deposited at United Nations on October 13, 1992. The Convention entered into force March 21, 1994.[61]

The two primary international schemes for addressing climate change are the UNFCCC and the Kyoto Protocol negotiated under the auspices of the Convention. There are no country-specific emission reductions required under that Convention. The U.S. is not a party to the Kyoto Protocol which has country-specific mandatory obligations for emission reductions.

The objective of the Convention is "to achieve . . . stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[62] The commitments of the parties are primarily laid out in Article 4.[63] These commitments are primarily along the lines of providing information and developing policies that promote the Convention objective. There are no country-specific emission reduction targets but, rather, for Annex I countries (primarily developed countries) "the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other Greenhouse gases not controlled by the Montreal Protocol."[64] The U.S. is an Annex I country. The Convention sets forth the principles that shall guide parties in implementing the provisions of the Convention;[65] however, it leaves to each country the details for implementation.

Although Article 4 in its entirety is relevant, two provisions that are especially relevant are 1(f) and 2(a):

> 1. All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:
>
> * * * * *
>
> (f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change;
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> * * * * *

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[61] On Sept. 8, 1992, President George Bush transmitted the United Nations Framework Convention on Climate Change (1992) (hereinafter "UNFCCC") for advice and consent of the U.S. Senate to ratification. The Foreign Relations Committee approved the treaty and reported it (Senate Exec. Rept. 102-55) Oct. 1, 1992. The Senate consented to ratification on Oct. 7, 1992, with a two-thirds majority vote. President Bush signed the instrument of ratification Oct. 13, 1992, and deposited it with the U.N. Secretary General.

[62] UNFCCC, art. 2.

[63] *See also id.* at arts. 5 and 6 (research and observation duties and education, training and pubic awareness commitments).

[64] *Id.* at art. 4(2)(b).

[65] *Id.* at art. 3.

> 2. The developed country Parties and other Parties included in Annex I commit themselves specifically as provided for in the following:
>
> (a) Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its GHG sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other Greenhouse gases not controlled by the Montreal Protocol would contribute to such modification, and taking into account the differences in these Parties' starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstances, as well as the need for equitable and appropriate contributions by each of these Parties to the global effort regarding that objective. These Parties may implement such policies and measures jointly with other Parties and may assist other Parties in contributing to the achievement of the objective of the Convention and, in particular, that of this subparagraph . . . .

E. Conclusion

There is substantial general authority for executive action on climate change. Climate change has been a recognized national policy issue for at least three decades. In 1978, Congress passed the National Climate Program Act and has continued to pass legislation explicitly addressing climate change, global warming or greenhouse gases ever since. Congress has delegated to the President, through legislation, substantial authority to develop climate change policy and organize and manage federal operations to address the issue. In terms of historical executive action, beginning with George H. Bush in 1990 presidents have been issuing proclamations acknowledging concern over GHG emissions and global warming. More recently, President Clinton and President George W. Bush have issued comprehensive executive orders directing agency action on climate change and GHG emissions (on June 3, 1999 and January 24, 2007, respectively). Beginning almost a decade ago, global climate change has explicitly been the subject matter of executive orders.

III. Proposal Evaluations

This section includes the individual evaluation for each of the PCAP priority proposals. Each evaluation follows generally the same format:[66]

Summary of Proposal as Provided by PCAP

Context for Proposal:

Relevant Text from the PCAP Report

* * * * *

Background.

Statutes.

Authority Over Agency.

Executive Orders.

Conclusion.

Evaluation Summary (Good, Questionable, Poor).

[66] Proposal A, C-2 and C-3 follow a modified version of this format.

A. Establish National Energy and Carbon Goals

1. **Reduce CO_2 emissions at least 80% by 2050, compared to 1990, and at least 25% by 2020.**
2. **Reduce national petroleum consumption 50% by 2020, with no increase in domestic production.**
3. **Reduce vehicle miles traveled 20% by 2020; 50% by 2050.**
4. **Reduce per capita carbon emissions by half.**
5. **Obtain 25% of electric generation from renewable sources by 2025.**
6. **Reduce economy-wide energy demand at least 2.5% annually, leading to a reduction of 25% by 2020 and 50% by 2030.**
7. **Increase CAFE standard for passenger vehicles and light trucks to 50 mpg by 2020, and 200 mpg by 2050.**

A1-7

Generally. The President has substantial authority to set energy and climate change policy as established in Chapter II of this report and examined further below. Nothing prevents the President from proclaiming the policies and recommendations developed under his authority to plan national energy and climate change policy, or to use an executive directive for this proclamation which can include goals and targets.

Historically, the President has issued directives for many of the same types of goals and targets in the context of federal operations.[67] These executive orders are directed to agency officials and are typically limited to the management of their operations. These executive orders are the subject matter of Proposal C-2. In terms of directly regulating the activities of the general public, however, such a directive would be aspirational, which is consistent with the manner in which this proposal is framed in the PCAP Report. By convention, directives that are issued to those outside the government are issued as presidential proclamations; executive orders are directed to officials within the government,[68] and proclamations are more suited for aspirational directives.[69]

Pursuant to the Global Climate Protection Act of 1987[70] (GCPA), which mandates action on global climate change, "The President, through the Environmental Protection Agency, shall be responsible for developing and proposing to Congress a coordinated national policy on global climate change."[71] Further, the Act specifies that such policy formulation shall consider research findings of various U.S. science agencies and committees as well as "organizations engaged in

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[67] E.g., Exec. Order Nos.: 13148, 13149, 13123, 12902, 12856, 12003 and 13423. These are analyzed in Proposal C-2.
[68] See Boundaries Report, Chapter II(1), (2).
[69] See, e.g., Chapter I of this report (proclamation section).
[70] Codified at 15 U.S.C. § 2901 Note.
[71] 15 U.S.C. § 2901 Note, § 1103 (b). See also, 15 U.S.C. § 2938(b)(1) (indicates this is an ongoing obligation).

the conduct of scientific research." In addition to the numerous reports on climate change that have been prepared, both nationally and internationally, reflecting the serious implications of climate change, on May 29, 2008, the U.S. Climate Change Science Program issued a report on the Scientific Assessment of the Effects of Global Change on the United States.[72] The report documents the numerous adverse impacts global warming is already having on the United States and the likely future impacts on the nation, including impacts to human health, water supply, agriculture, transportation, and biodiversity. The report also explicitly acknowledges that carbon dioxide and other greenhouse gas emissions are the primary cause of the warming.

In terms of national policy established by Congress, the following fully supports the action in this proposal:

> The Congress finds and declares . . . [w]eather and climate change affect food production, energy use, land use, water resources and other factors vital to national security and human welfare.[73]
>
> * * * * *
>
> The Congress finds . . . [w]hile the consequences of the greenhouse effect may not be fully manifest until the next century, ongoing pollution and deforestation may be contributing now to an irreversible process. Necessary actions must be identified and implemented in time to protect the climate.[74]
>
> * * * * *
>
> The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.[75]

Also relevant to this proposal is the President's role in planning national energy policy. Pursuant to 42 U.S.C. § 7321, the President biennially prepares and submits to Congress a proposed National Energy Policy Plan (NEPP) and report.[76] The proposed Plan shall "*consider and establish energy* production, utilization, *and conservation objectives*, for periods of five and ten years, necessary to satisfy projected energy needs of the United States to meet the requirements of the general welfare of the people of the United States and the commercial and industrial life of

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[72] *Scientific Assessments of the Effects of Global Change on the United States, A Report of the Committee on Environmental and Natural Resources*, National Science & Technology Council (May 2008), available at http://www.climatescience.gov/Library/scientific-assessment/. The assessment and research plan were issued as a result of the court ruling case *Center for Biological Diversity v. Brennan*, (Case No. 06-CV-7062 (SBA) (N.D. Cal.).
[73] 42 U.S.C. § 2901(1) (National Climate Program Act).
[74] *Id.* at § 2901 Note §1102(4) (GCPA).
[75] *Id.* at § 4331(c) (congressional declaration of national environmental policy).
[76] Once submitted to Congress the Plan is referred to the appropriate committees and reviewed. If deemed appropriate and necessary, the committees report to the Senate or the House of Representatives. Legislation regarding such Plan which may contain alternatives to, modifications of, or additions. 42 U.S.C. § 7322.

the Nation, *paying particular attention to the needs for* full employment, price stability, energy security, economic growth, *environmental protection*, nuclear non-proliferation, special regional needs, and the efficient utilization of public and private resources. . . ."[77] In addition, the report that is submitted with the Plan shall include a summary of research and development efforts funded by the Federal government to forestall energy shortages, to reduce waste, to foster recycling, to encourage conservation practices, and to otherwise protect environmental quality, including recommendations for developing technologies to accomplish such purposes . . ."[78]

The NEPP must include a least cost energy strategy (LCES).[79] The strategy must be designed to "achieve to the maximum extent practicable" five objectives. Three of these are specific targets for increasing energy efficiency, increasing energy derived from renewable resources, and reducing national oil consumption, although the target dates have passed for the first two, and one of the targets is "the stabilization and eventual reduction in the generation of greenhouse gases."[80] Further, there are seven priorities that "shall be given full consideration." The priorities closely parallel the targets proposed here.[81]

Given the President's role and authority in planning national energy and climate change policy, resort to additional supporting legislation is not technically necessary to conclude that the President has the authority to take the action in this proposal. However, there is a substantial amount of legislation that supports air pollution prevention,[82] energy conservation,[83] energy efficiency,[84] and the increased use of renewable energy.[85] Many of these statutes were not passed explicitly to address global warming; nonetheless, they are all strategies to reduce greenhouse gas emissions and are supported by the establishment of the goals and targets proposed here. Thus, these laws lend an additional level of legitimacy and credibility to the proposed directive in that the directive furthers the purposes and goals of the statutes and the policies represented by these laws.

Finally, it should not go without mention that the U.S. is a party to and has ratified the UNFCCC. See Chapter II, part D. Although the U.S. is not committed to specific GHG reductions targets because the U.S. is not a party to the Kyoto Protocol, as a party to the UNFCCC the U.S. is committed to the following objective: "to achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic

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[77] 42 U.S.C. § 7321(b)(1) (emphasis added).
[78] *Id.* at § 7421(c)(4).
[79] *Id.* at § 13382(a) (the LCES is prepared by the DOE).
[80] *Id.* (the specific targets are specific goals in the following areas: increase energy efficiency, energy derived from renewable resources, and a reduction in national oil consumption).
[81] *Id.* at § 13382(d).
[82] See, e.g., the following Chapters of Title 42: 133 Pollution Prevention, 85 Air Pollution Prevention and Control (see especially 42 U.S.C. §§ 7410-7627 (the CAA)), 56 Environmental Quality Improvement, and 55 National Environmental Policy.
[83] See e.g., the following chapters of Title 42: 152 Energy Independence and Security, 149 National Energy Policy and Programs, 134 Energy Policy, 91 National Energy Conservation Policy, 81 Energy Conservation and Resource Renewal, and 77 Energy Conservation.
[84] *Id.*
[85] See, e.g., the following Chapters of Title 42: 152 Energy Independence and Security, 125 Renewable Energy and Energy Efficiency Technology Competitiveness, 96 Biomass Energy and Alcohol Fuels, and 71 Solar Energy.

interference with the climate system."[86] Further, Annex I countries (the U.S. is an Annex I country) have the following commitment: "the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol."[87]

The following is a brief summary of some additional legislation that is relevant to each of the proposals. This is in addition to the authority identified above.

1) Reduce CO_2 emission at least 80% by 2050, compared to 1990, and at least 25% by 2020.

> *2. Establish aggressive goals for reducing greenhouse gas emissions.*
> *PCAP recommends greenhouse gas reduction goals along the lines of those framed by the Nicholas Institute at Duke University. The United States and other developed nations should begin cutting greenhouse gas emissions immediately to achieve reductions of 80%-90% by 2050. From 2011 to 2020, greenhouse gas emission reductions in the United States should average 3% annually, compared with 2010 levels. Those reductions should be achieved by harvesting the economy's low-hanging fruit – large gains in energy efficiency and the deployment of currently available low-emission energy supply technologies. This would reduce national greenhouse gas emissions 30% by 2020.* PCAP Report 2:3.

The U.S. commitment under the UNFCCC closely parallels this target. The U.S. along with other Annex I countries are committed to "the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol."[88] This includes a commitment to "take climate change considerations into account, to the extent feasible, in . . . relevant social, economic and environmental policies and actions," and "adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases. . . . "[89] In addition, one of the five goals in the LCES is "the stabilization and eventual reduction in the generation of greenhouse gases."[90] Further, it seems unavoidable that CO_2 as well as other GHGs will be regulated as pollutants under the CAA. See Proposal B-14. The primary purpose of CAA regulation is to reduce the emission of such air pollutants.

2) Reduce national petroleum consumption 50% by 2020, with no increase in domestic production.

> *1. Recalibrate the national energy policy.*

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[86] United Nations Framework Convention on Climate Change, Art. 2 (1992), (hereinafter "UNFCCC").
[87] *Id.* at art. 4(2)(b).
[88] *Id.* at art. 4(2)(b).
[89] *Id.* at art. 4(1)(f), (2)(a).
[90] 42 U.S.C. § 13382(a)(2).

> *The President should establish the following goals, milestones and performance indicators for national energy policy: …*
> *From 2010 to 2050: Economywide energy demand will be reduced at least 2.5% annually, leading to reductions of at least 25% by 2020 and 50% by 2030. The savings will involve all sectors – buildings, industry, transportation and energy supply.* PCAP Report 3:4.
>
> *2. Reduce domestic oil consumption 50% by 2020.*
>
> *This reduction exceeds the amount of petroleum the U.S. imports from the Persian Gulf and from OPEC. However, the way petroleum is handled in the world oil market makes it difficult to ensure that the United States is no longer consuming oil from the Persian Gulf. The President should convene a Presidential Commission on Energy Independence to develop a strategy for: 1) achieving the 50% reduction target, 2) reducing or ending the flow of American dollars to the Gulf, and 3) eliminating oil imports by mid-century. The Commission should build upon the work already done on these goals by other groups, including the National Commission on Energy Policy.* PCAP Report 4:4.

This target is framed in terms of recalibrating the energy plan. The President has a key role in planning national energy policy. Further, this is consistent with a national policy that has been established for over twenty years. Chapter 4(C) of the Boundaries Report reviews some key pieces of legislation passed in the 1970s, largely in response to the "Oil Crisis" that resulted from the OPEC oil embargo. The primary purpose of this legislation is to reduce reliance on imported sources of energy, specifically petroleum, and one of the key strategies employed in the legislation is the reduction of energy consumption through conservation and efficiency.[91] The Energy Independence and Security Act of 2007 is a more recent declaration of this national policy.[92]

The President has the authority to convene the commission contemplated by this proposal. Depending on the composition of the commission it may be subject to the administrative and open-government requirements of the Federal Advisory Committee Act (FACA). Advisory committees are the subject matter of Proposal F.

3) Reduce vehicle miles traveled 20% by 2020; 50% by 2050.

> *The President should set these parameters [as part of 1 above]:*

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[91] See, e.g., National Energy Conservation Policy Act, Pub. L. No. 95-619, 92 Stat. 3206 (1978), (codified at 42 U.S.C. §§ 8201-8287d); Energy Policy and Conservation Act, Pub. L. No. 94-163, 89 Stat. 871 (1975) (primarily codified at 42 U.S.C. §§ 6201-6244); Boundaries Report, Chapter (C)(2).

[92] Pub. L. No. 110-140, 121 Stat. 1498 (2007) ("An Act to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes.")

> *The reduction in imports should be achieved with greater vehicle efficiency, reduced vehicle miles traveled and alternative fuels, not by increasing domestic oil production.* PCAP Report 4:4.

This target is framed in terms of recalibrating the energy plan. The President has a key role in planning national energy policy. Again, reducing imported fuel has been a national policy or goal since the mid-1970s, see Proposal A-2, and this proposal is framed as a strategy to meet that goal. Further, there are a number of statutes that support improvements in mass transportation systems, e.g., Congress has authorized public assistance to develop high-speed rail.[93] The rationale, in part, for establishing and supporting public mass transit as set forth by Congress as a finding to support a public commuter rail passenger transportation system is that it "is important to the viability and well-being of major urban areas and to the energy conservation and self-sufficiency goals of the United States."[94]

4) Reduce per capita carbon emissions by half.

> *6. Make greenhouse gases visible and climate action personal.*
> *Greenhouse gas emissions should become a more visible factor for policymakers and consumers. The President should: ...*
>
> *Challenge Americans to reduce their per capita energy consumption by half, roughly the per capita consumption in Western Europe and Japan. Consumers can measure their performance with greenhouse gas calculators available on the Internet.* PCAP Report 2:8.

This target is framed as "a challenge," thus, it is purely aspirational. As quoted above from the congressional declaration of national environmental policy, ". . . each person has a responsibility to contribute to the preservation and enhancement of the environment."[95] Again, this target closely parallels the U.S. commitment under the UNFCCC to reduce GHGs, and is supported by one of the LCES goals and the purposes of the CAA. See Proposal A-1 above. In addition, there are numerous statutory provisions passed with the objective of reducing energy consumption by the general public, for example, energy conservation programs for consumer products,[96] energy conservation standards for new buildings,[97] CAFÉ standards for automobiles,[98] renewable fuel standards for transportation fuels,[99] etc.

5) Obtain 25% of electric generation from renewables by 2025.

> *1. Recalibrate the national energy policy.*

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[93] 49 U.S.C. §§ 26101-26105.
[94] *Id.* at § 24101(a)(5).
[95] 42 U.S.C. § 4331(c).
[96] *Id.* at §§ 6291-6309.
[97] *Id.* at §§ 6831-6836; see also, 42 U.S.C. §§ 17061-17124 (energy savings in the building industry).
[98] 49 U.S.C. § 32902.
[99] 42 U.S.C. § 7545(o).

> *The President should establish the following goals, milestones and performance indicators for national energy policy: ...*
>
> *By 2020: About 20%-30% of the nation's electricity will be generated from renewable resources; . . .* PCAP Report 3:5.

This target is framed in terms of recalibrating the energy plan. The President has a key role in planning national energy policy. One of the targets in the LCES is a specific goal to increase the percentage of energy derived from renewable resources (although the target expired in 2005), and one of the LCES priorities is to "promote the use of renewable energy resources, including solar, geothermal, sustainable biomass, hydropower, and wind power." [100] Further, it seems unavoidable that CO_2 as well as other GHGs will be regulated as pollutants under the CAA. See Proposal B-7. The purpose of the regulation is to reduce emissions of air pollutants from categories of sources. Stationary sources, such as power generating facilities are regulated under Section 111.[101] In addition, the DOE, acting pursuant to the Renewable Energy and Energy Efficiency Technology Competitiveness Act, is pursuing "an aggressive national program of research, development, demonstration, and commercial application of renewable energy and energy efficiency technologies. . . ." The Act is based on the congressional finding that, "it is in the national security and economic interest of the United States to foster greater efficiency in the use of available energy supplies and greater use of renewable energy technologies."[102]

6) Reduce economy-wide energy demand at least 2.5% annually, leading to a reduction of 25% by 2020 and 50% by 2030.

> *The President should establish the following goals, milestones and performance indicators for national energy policy:*
>
> *From 2010 to 2050: Economywide energy demand will be reduced at least 2.5% annually, leading to reductions of at least 25% by 2020 and 50% by 2030. The savings will involve all sectors – buildings, industry, transportation and energy supply.* PCAP Report 3:4.
>
> *The President should champion congressional approval of a national portfolio standard that codifies the energy efficiency and renewable energy goals listed above, requiring electric power providers to obtain at least 20% of their electricity from renewable resources by 2020. Starting in 2010, electric utilities would be required to reduce their baseline electric sales by 0.6% annually through efficiency. Natural gas utilities would be required to reduce baseline gas sales annually by 0.3%.* PCAP Report 3:6.

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[100] 42 U.S.C. § 13382(a)(4), (d)(4).
[101] *Id.* at § 7411; Boundaries Report, Chapter VIII(1). See also, Boundaries Report, Chapter IV(C)(2) (review of legislation passed in the 1970s to promote the use of alternative fuels by powerplants).
[102] 42 U.S.C. § 12002(a),(b).

This target is framed in terms of recalibrating the energy plan. The President has a key role in planning national energy policy. Energy conservation and efficiency have been national policy for over 20 years. See Proposal A-2. In addition, there are numerous statutory provisions passed with the objective of reducing energy consumption by the general public. See Proposal A-4. Several of the LCES priorities regard energy efficiency and conservation.[103]

7) Increase CAFÉ standard for passenger vehicles and light trucks to 50 mpg by 2020 and 200 mpg by 2050.

> *The President should propose that Congress delegate authority to the Department of Transportation (DOT) to adjust CAFÉ standards for passenger vehicles, as the DOT now does for other types of vehicles.* PCAP Report 3:5.
>
> *In addition, the President should propose an increase in the Corporate Average Fuel Efficiency Standard (CAFÉ) for passenger vehicles and light trucks to at least 50 miles per gallon by 2020, and to increase the standard incrementally to 200 mpg by 2050. Advancements in nonpetroleum vehicles by 2050 will make this goal possible on a fleet-wide basis.* PCAP Report 7:4.

The Energy Independence and Security Act passed into law on December 19, 2007, [104] amended the authority for establishing average fuel economy standards (CAFÉ standards). Prior to the amendment, the CAFÉ standard for passenger automobiles was set by statute. The DOT had no authority to increase it above 27.5 mpg without an act of Congress.[105] Under the revisions, the Secretary of Transportation, after consultation with the Secretary of Energy and the Administrator of the EPA, shall prescribe separate average fuel economy standards for: (A) passenger automobiles manufactured by manufacturers in each model year beginning with model year 2011; (B) non-passenger automobiles manufactured by manufacturers in each model year beginning with model year 2011; and (C) work trucks and commercial medium-duty or heavy-duty on-highway vehicles.[106] The DOT is required to increase the standard for automobiles progressively with a minimum standard of 35 mpg by 2020 for the total fleet of passenger and non-passenger automobiles manufactured for sale in the United States for that model year. For model years 2021 through 2030, the average fuel economy required to be attained by each fleet of passenger and non-passenger automobiles shall be "the maximum feasible average fuel economy standard" for each fleet for that model year.[107]

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[103] 42 U.S.C. § 13382(d)(1), (2), (5), (6).
[104] Pub. L. No. 110-140, 121 Stat. 1498 (2007).
[105] The National Highway Safety & Transportation Administration (NHSTA) is the administration in the DOT that implements CAFÉ standards.
[106] 49 U.S.C. § 32902.
[107] *Id.* at § 32902(b)(2).

This proposal is framed in terms of advancing a national energy policy. The President has a key role in planning national energy policy. In terms of implementing a new CAFÉ standard, the authority is delegated to the DOT (after consultation with the EPA and the DOE), and by statute the DOT must make certain findings and ensure that any new standard meets certain criteria before a new standard is set. The President cannot make the findings and determinations for the agency. See Proposals B-7 and B-8 for a similar analysis. However, the President can re-establish federal policy in this regard (e.g., establish this standard as part of the national energy plan) and direct the DOT to review the standard based on this policy and revise it as permitted by law.

Conclusion. Based on the aspirational nature of the targets and goals, and the President's substantial authority to plan national energy and climate change policy, these targets and goals are good candidates for implementation by executive directive. Support for this directive can also be found in numerous statutory provisions. Some of these have been presented in this analysis. In addition to being aspirational, these targets are directed to the general public, thus by convention, the President should consider issuing the directive as a presidential proclamation.

Good candidates to implement by executive directive (7 proposals). Alternative form recommended.

B. Mobilize Agencies for Carbon Mitigation

Direct EPA to accelerate its efforts to capture methane and convert it to useful energy at the Nation's 1,650 landfills.

B-1

The President should direct the Environmental Protection Agency to accelerate national efforts to capture methane—a greenhouse gas 23 times more potent than carbon dioxide in trapping heat in the atmosphere— for energy production from the nation's 1,650 landfills. PCAP Report 3:11.

Background. The primary activities pursued by the EPA for capturing and converting methane from landfills include: the adoption and implementation of the Municipal Solid Waste Landfills Rule ("the Landfill Rule") requiring the capture and combustion of methane at large landfills; the Methane to Markets Partnership, a voluntary international partnership to promote the capture and conversion of methane; and the Landfill Methane Outreach Program (LMOP), a voluntary assistance and partnership program that promotes the use of landfill gas as a renewable, green energy source.

Statutes and Other Authority. The Landfill Rule[108] was adopted pursuant to section 111(a)(1) of the CAA as a standard of performance for a new source.[109] The regulatory process under the CAA is described in Chapter 8 of the Boundaries Report (see especially section 1(c)). The rule applies to every landfill that: (1) does or did accept municipal solid waste; (2) was active on or after November 8, 1987; (3) has a total permitted capacity of at least 2.5 million metric tons of waste; and (4) has nonmethane organic compound emissions of at least 50 metric tons per year. The rule requires capture and combustion of methane but not conversion of the gas into energy. Methane is also regulated under the 2003 *National Emission Standards for Hazardous Air Pollutants* (NESHAP).[110] The regulation of methane in its current form was adopted as a strategy to reduce smog-causing and toxic emissions, although the impact of methane emitted from landfills on global warming was noted. The EPA does not yet regulate GHGs based on their contribution to climate change under the CAA.[111]

The formation of the Methane to Markets Partnership was announced as a presidential initiative on July 28, 2004. Under the Partnership, member countries will work in coordination with the private sector to share and expand the use of technologies to capture methane emissions that are now wasted in the course of industrial processes and use them as a new energy source. The

[108] Codified at 40 C.F.R. Parts 51, 52, and 60. The final rule adopted on March 12, 1996, 60 C.F.R. § 9918, and all of the subsequent amendments can be accessed through EPA's Web site *available at* http://www.epa.gov/ttn/uatw/landfill/landflpg.html.
[109] Codified at 42 U.S.C. § 7411(b)(1)(A).
[110] Methane is especially hazardous because it is combustible.
[111] See Proposal B-7.

partnership is working to reduce methane emissions in four key sectors: agriculture (animal waste management), coal mines, landfills, and oil and gas systems. The Partnership is led by the Environmental Protection Agency, working closely with the Department of State, the Department of Energy, and the United States Agency for International Development.[112]

The EPA launched the LMOP to encourage productive use of methane as part of the United States' commitment to reduce greenhouse gas emissions under the UNFCCC. It is a voluntary assistance and partnership program that promotes the use of landfill gas as a renewable, green energy source. The LMOP provides information, software tools, marketing assistance, and access to technical experts to facilitate development of landfill gas energy projects.[113]

Authority over the EPA. The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies, generally, the President's authority over the EPA would be much the same as an executive department.[114] In terms of this specific proposal, the President has the authority to direct the EPA to accelerate its efforts to the extent permitted by law.[115] This authority will be further enhanced if the EPA determines that GHGs endanger public health or welfare under the CAA based on their impact on global climate change,[116] considering: 1) the President's constitutional authority as the person vested with the power of the Executive Branch, duty to take care the laws be faithfully executed, and duty to preserve, protect and defend the Constitution including the purpose of promoting the general welfare;[117] 2) the President's substantial authority in planning energy and climate policy as established in Chapter II of this report; and 3) the science regarding climate change and GHG emissions.

Executive Orders. There are numerous executive orders that direct agencies to proceed expeditiously. For example, E.O. 13158 directs the EPA to begin rulemaking to address the protection of beaches, coasts, and the marine environment from pollution and to expeditiously propose new regulations.[118] Further there are numerous executive orders that demand immediacy.[119]

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[112] White House press release, *available at* http://www.whitehouse.gov/news/releases/2004/07/20040728-2.html

[113] Information about the LMOP is available at EPA's Web site: http://www.epa.gov/lmop

[114] Boundaries Report, Chapter VI(1)(c).

[115] There are timelines set for certain activities under the Act. See Boundaries Report, Chapter VIII(1).

[116] *See* Proposal B-7.

[117] U.S. Const., Art. II, sects. 1, 3, and Art. I, *forward.*

[118] Exec. Order No. 13158, sec. 2(f), 65 Fed. Reg. 34, 909 (May 26, 2000); see also, e.g., Exec. Order Nos.: 13274 (agencies shall to the maximum extent practicable expedite their reviews for relevant permits or other approvals, and take related actions as necessary); 13212 (agencies shall expedite projects that will increase the production, transmission, or conservation of energy, expedite their review of permits or take other actions as necessary); 13139 (expeditiously review waiver requests); 13101 (expedite the process of designating items that are or can be made with recovered materials); 12333 (procedures required by this Order shall be established as expeditiously as possible); 12153 (the Secretary shall expeditiously conduct a public inquiry as to what other types of heavy crude oil, if any, should be exempted from price controls).

[119] E.g., Exec. Order Nos.: 13186 (agencies are encouraged to immediately begin implementing the conservation measures set forth above); 13271 (the Attorney General shall immediately establish within the Department of Justice a Corporate Fraud Task Force); 13103 (agencies are encouraged to immediately test and evaluate the principles and concepts contained in the EPA's guidance on the Acquisition of Environmentally Preferable Products).

Conclusion. Based on the authority under which the EPA is conducting its activities in regard to methane capture and storage and past executive action, the President has the authority to order the EPA to expedite its work in this area, limited only by the specific time requirements in the CAA.

Good candidate to implement by executive order.

If it hasn't done so by Inauguration, direct the Federal Trade Commission to work with the carbon offset industry to create voluntary standards and an approved third-party certification process for greenhouse gas offset programs. Base the standards on EPA's criteria for crediting air pollution mitigation measure under the Clean Air Act (quantifiable, permanent, new, etc.). **B-2**

8. Create standards for greenhouse gas offset programs.

In the fall of 2007, the Federal Trade Commission agreed to review consumer protection issues in the emerging greenhouse gas offset industry. The President should direct the Administration to work with the industry to develop universal voluntary standards and an approved third-party certification process for greenhouse gas offset programs. The standards, which could be based on EPA's criteria for crediting air pollution mitigation measures under the Clean Air Act, would protect the integrity of the industry by ensuring that its offset programs produce real greenhouse gas reductions, do not double-count reductions, and are well managed and transparent. PCAP Report 2:9.

Background. The Federal Trade Commission (FTC) implements the FTC Act including the provisions that address unfair or deceptive acts or practices. Under these provisions the FTC has developed a variety of rules and guides related to energy and environmental marketing practices. The Guides for the Use of Environmental Marketing Claims ("Green Guides") address the application of Section 5 of the FTC Act to environmental advertising and marketing practices. The FTC is currently considering revising the Green Guides to address carbon offsets and renewable energy certificates (RECs) and related advertising claims, and conducted a public workshop on January 8, 2008 on this issue.[120] The FTC is considering other amendments to the Green Guides and to this end conducted a workshop on April 30, 2008 and has announced another on July 15, 2008.[121] According to FTC staff, a final decision regarding amendments to the Green Guides is not expected until the end of 2008.[122]

Statutes.[123] The FTC implements and enforces Chapter 2 of Title 15 (Commerce and Trade). This includes the FTC Act[124] and specifically the provisions that address unfair or deceptive acts

[120] 72 C.F.R. § 66091, Guides for the Use of Environmental Marketing Claims, Request for Public Comment; Announcement of Public Meetings (Nov. 27, 2007); 72 Fed. Reg. 66094-01, Guides for the Use of Environmental Marketing Claims; Carbon Offsets and Renewable Energy Certificates; Public Workshop (November 27, 2007).
[121] 73 Fed. Reg. 11371-01, Marketing Claims; The Green Guides and Packaging; Public Workshop, (Mar. 3, 2008); 73 Fed. Reg. 32662-01, Guides for the Use of Environmental Marketing Claims; Green Building and Textiles; Public Workshop (Jun. 10, 2008).
[122] Hampton Newsome, Attorney, FTC, coordinator for January Workshop (email and telephone communications, June 2008).
[123] The information in this section is largely from, 72 Fed. Reg. 66094-01.
[124] 15 U.S.C. §§ 41-58.

or practices.[125] It is under these statutory provisions that the FTC has recently undertaken the examination of the emerging market for carbon offsets (i.e., greenhouse gas emission reduction products) and renewable energy certificates, and related advertising claims. The public workshop on this issue is a component of the Commission's regulatory review of the Green Guides.

While the FTC has often addressed consumer protection issues related to energy and environmental issues, the FTC maintains that it does not have the authority or expertise to establish environmental performance standards. Accordingly, the FTC does not plan to develop environmental standards for carbon offsets and RECs. The FTC's efforts in this area will focus on their traditional consumer protection role, addressing deceptive and unfair practices under the FTC Act.

The FTC enforces the FTC Act, which states that unfair or deceptive trade practices are unlawful. In interpreting this Act, the FTC has determined that a representation, omission, or practice is deceptive if it is likely to mislead consumers acting reasonably in the circumstances and is material. In exercising its authority under the FTC Act or other statutes, the FTC has developed a variety of rules and guides related to energy and environmental marketing practices. One of these, the Green Guides, addresses the application of Section 5 of the FTC Act to environmental advertising and marketing practices. The Green Guides provide information on consumer interpretation of certain environmental marketing claims so that marketers can avoid making false or misleading claims. The Green Guides focus on the way in which consumers understand environmental claims and not necessarily the technical or scientific definition of various terms.

Under the FTC Act, all marketers making express or implied claims about the attributes of their product or service must have a reasonable basis for their claims at the time they make them. In the realm of environmental advertising, a reasonable basis often requires competent and reliable scientific evidence. Such evidence includes tests, research, studies, or other evidence based on the expertise of professionals in the relevant area that have been conducted and evaluated in an objective manner by persons qualified to do so, using procedures generally accepted in the profession to yield accurate and reliable results.

Authority over the FTC. The FTC is an independent agency, both by statutory designation, 44 U.S.C. § 3502(5), and by attributes.[126] It is headed by a multi-member body (a five member commission). Although all of the commissioners are appointed by the President, by and with the advice and consent of the Senate, and the President chooses the chairman from the Commission's membership, each commissioner holds a fixed term of seven years, the terms are staggered (one per year), a Commissioner can only be removed by the President for cause ("for inefficiency, neglect of duty, or malfeasance in office"), and not more than three of the commissioners can be members of the same political party.[127]

Thus, the President's authority over the FTC is the most limited.

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[125] *Id.* at § 57a-57c-2.
[126] 15 U.S.C. § 41
[127] *Id.* (establishment of FTC); *Boundaries Report*, Chapter VI(2) (attributes of independence).

Executive Orders. There are 30 executive orders published in the *Federal Register* that specifically name the FTC for inclusion.[128] The earliest is dated August 2, 1938; however, of those relevant here (18), the orders are limited to participation in advisory groups, working groups, councils, task forces and the like (14) and government operations (e.g., procurement, promoting policies and providing information to other agencies). The former are groups that are tasked to coordinate actions and/or review government operations or policies on specific issues. There are no executive orders that direct the FTC in the substantive work of the agency such as the proposed action here.

Conclusion. The FTC is an independent agency by statutory designation and attribute. Thus, there is little basis for presidential authority in terms of directing the action specified in this proposal. However, the FTC is currently undertaking a review of this action. It is probably not a coincidence that the final decision on amendments to the Green Guides will not come until after the next presidential election. Because of this timing, the FTC will be able to consider the next administration's policy on climate change. The FTC efforts will focus on consumer protection, it does not plan to develop environmental standards for carbon offsets and RECs. If the President is not satisfied with the final action one option is to seek intervention by Congress, i.e. a statute directing the FTC to amend the final action or directing additional review by the Commission.

Poor candidate to implement by executive order. Alternative action suggested.

[128] Executive Orders 13402, 13133, 12262, 12124, 12138, 12052, 12022, 11614, 11349, 11136, 10370, 10161, 8839, and 8734 (task forces and the like); 12849, 12260 (procurement policy); 12138 (promote female-owned business); 10033 (provide statistical information); 11704, 11642, 11568, 10908, 10544, 10090, 9833, 9830, 98909, 9004, 8082, 7942 (other).

Direct DOE to develop a registry of energy technologies that should be given highest priority in national policy because they reduce vulnerability to terrorist attack on US infrastructure and energy supplies. Use the registry to support a request to Congress to give priority funding to these technologies.

B-3

The President should direct the U.S. Department of Energy to develop a registry of energy technologies that should be given highest priority in national energy policy because they reduce vulnerability to terrorist attack. The President should propose to Congress that it give special consideration in appropriations to technologies on the registry. PCAP Report 4:7.

Background. A registry is basically a formal list or record. Thus, this proposal is a request for the DOE to compile and provide information in a particular form and maintain this information, keeping it up-to-date.

Statutes. The DOE is the primary agency for implementing energy plans and programs including those that develop and deploy energy technologies.[129] Some examples include: establishing the innovative environmental technology transfer program;[130] chairing the Committee on Climate Change Technology,[131] overseeing nuclear energy research and development programs,[132] and substantial authority under the Energy Independence and Security Act in overseeing research and development into other alternative energy technologies.[133] This proposal falls within the mission of the DOE.[134] Further, the DOE is already under statutory obligations to compile and report on similar or related information, for example, the content of the least cost energy strategy,[135] a list of eligible technologies under the innovative environmental technology transfer program;[136] information collected for the biofuels and biorefinery information center, etc.[137]

The President has a substantial role in planning energy policy, see e.g., Chapter II, and has a central role in maintaining national security. This proposal goes to both energy planning and national security.

In addition to the protection of the health and welfare, this proposal furthers the purposes of statutes that address energy security issues; for example, the President is required to submit to

[129] See, e.g., 42 U.S.C. Chapter 84, Department of Energy.
[130] 42 U.S.C. § 13387.
[131] *Id.* at § 13389(b).
[132] *Id.* at §§ 16271-16277.
[133] Pub. L. No. 110-140 (Dec. 19, 2007).
[134] See, 42 U.S.C. § 7112 (purpose of Department).
[135] *Id.* at § 13382 (b).
[136] *Id.* at. § 13387(h).
[137] *Id.* at § 17033.

Congress annually a comprehensive report on the national energy security of the United States.[138]

Authority over the Agency. The DOE is an executive department.[139] In regard to executive departments, it is presumed that the President is constrained only by the requirement that he "not direct any act beyond the bounds of an administrator's legal authority."[140] In terms of this proposal, it essentially directs the DOA to provide and maintain information in a particular form. This falls within the procedural supervisory authority over administrative officers as discussed in Chapter I.[141] This enables the President to demand information from and engage in consultation with agencies and their officers. This applies to all executive agencies across the board.[142]

Executive Orders. Executive orders have been used to direct the establishment of registries, for example, E.O. 13195, Trails for America in the 21st Century, January 18, 2001 (orders the establishment of a national trails registry and database "to further the purposes of the National Trails Act); E.O. 12806, Establishment of a Fetal Tissue Bank, May 19, 1992 (orders the establishment of a registry of certain physicians and hospitals). Similarly, executive orders have been used to establish clearinghouses, for example, E.O. 13055, Coordination of United States Government International Exchanges and Training Programs, July 21, 1997; E.O. 12906, Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure, April 11, 1994; and E.O. 12137, The Peace Corps, May 16, 1979.

Conclusion. The President has the authority to direct the DOE to develop the registry which is, in essence, an informational request. This falls within the DOE's mission and within the President's authority. It also furthers the purpose of national policy as established by statute. Executive orders have been used to order the establishment of registries and other repositories of information.

Good candidate to implement by executive order.

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[138] 42 U.S.C.A. § 17372.
[139] 5 U.S.C. § 101.
[140] Peter M. Shane, *Independent Policymaking and Presidential Power: A Constitutional Analysis,* 57 GEO. WASH. L. REV. 596, 609 (1989); See also, Boundaries Report, Chapter VI (It is said that executive agency heads serve "at the pleasure of the President" and, therefore, are under greater pressure to conform to the President's policy goals. Endnote omitted.).
[141] See Boundaries Report, Chapter VI (especially sections 1 and 4); *see also*, U.S. Const. Art. II, sect. 2.
[142] Kagan, *supra* at 2323-24.

Direct the Secretary of Energy to publish new criteria for loans made under the U.S. Department of Agriculture's (USDA's) Rural Development Utilities Program, and direct the Department of Agriculture to prohibit loans for the construction of coal-fired power plants that are not able to fully capture and sequester their carbon emissions. Further, direct the USDA to place high priority on loans that result in greater use of distributed energy systems that extend electric infrastructure to stranded renewable energy resources that increase the generation of electricity from landfill and agricultural methane, etc.[B-4]

The Department of Agriculture Rural Utility Service should redirect its low-interest loan program for rural electric cooperatives from funding coal-fired power plants to capitalizing projects that help rural America become the nation's primary source of renewable energy feedstocks and production. Eligible activities should include the development of rural wind farms; solar farms; methane-to-electricity systems at feedlots and municipal landfills; forestation and reforestation projects that increase carbon sequestration; conversion of rural energy systems and agricultural equipment to biofuels; rural biorefineries powered by renewable fuels; extension of transmission to stranded rural renewable energy resources; and economic development activities related to the manufacture or assembly of renewable energy equipment (i.e., wind turbines, turbine blades, photovoltaic panels, equipment for concentrating solar power). PCAP Report 3:10.

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Federal programs should help capitalize the plants, equipment and infrastructure needed for rural America's contribution to energy and climate security and promote local ownership of these projects. The President should: Direct that the low-interest loans offered by the U.S. Department of Agriculture's Rural Utility Service be redirected from the construction of coal-fired power plants to investments that equip rural America to be the nation's principal supplier of green energy (see PCAP Section 3). Encourage the nation's rural electric cooperatives, which reportedly plan to invest nearly $30 billion in new coal plants over the next decade, to invest instead in efficiency programs, renewable electric generation and infrastructure that help meet the nation's climate and energy security objectives. PCAP Report 5:4.

Background. This proposal contains three presidential actions: (1) direct the Secretary of Energy to publish new criteria for loans made under the USDA's Rural Development Utilities Program; (2) direct the USDA to prohibit loans for the construction of coal-fired power plants that are not able to fully capture and sequester their carbon emissions; and (3) direct the USDA to place high priority on loans that result in greater use of distributed energy systems that extend electric infrastructure to stranded renewable energy resources that in turn increase the generation of electricity from landfill and agricultural methane, etc.

The Rural Utilities Services (RUS) is the agency within the USDA authorized by the Rural Electrification Act of 1936 (REA) to evaluate and extend loans for rural electrical and telephonic development.[143] The RUS currently administers the Rural Development Utilities Programs (RDUP).[144] The Department of Energy ("DOE") is authorized by the REA to promulgate criteria that the Secretary of Agriculture is required to consider when deciding whether to extend REA loans.[145] Recently, the USDA announced that it has suspended low-interest loans for coal-fired plants, due in part to uncertainty over litigation. [146]

Statutes. The U.S. Court of Appeals for the 10th Circuit found that Congress' intent in enacting the REA was "to facilitate extension of electric service to rural America."[147] Pursuant to section 902 of the REA, the Secretary of Agriculture is generally authorized to "make loans . . . for rural electrification and for the purpose of furnishing and improving electric and telephone service in rural areas . . . and for the purpose of assisting electric borrowers to implement demand side management, energy efficiency and conservation programs, and on-grid and off-grid renewable energy systems."[148]

Pursuant to section 904, loans under this program are "for the purpose of financing the construction and operation of generating plants, electric transmission and distribution lines or systems for the furnishing and improving of electric service to persons in rural areas, including by assisting electric borrowers to implement demand side management, energy efficiency and conservation programs, and on-grid and off-grid renewable energy systems . . . ."[149] Thus, the REA confers broad discretionary authority to the Secretary of Agriculture to make loans for renewable energy projects intended to supply power to rural areas.[150] Although the authorizing provision specifically mentions renewable energy systems, there is not an explicit grant of authority to the Secretary of Agriculture to prohibit REA loans to otherwise eligible borrowers.

Four considerations govern loans for renewable energy systems under the REA:

1) The USDA is authorized to make REA loans.[151]
2) The Secretary of Agriculture is authorized to set conditions for REA loans.[152]

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[143] U.S. Dep't of Agriculture: Rural Development, Rural Electrification Act of 1936, Informational Publication 100-1, *viii*. The REA is codified at 7 U.S.C. §§ 901-950bb.
[144] 72 Fed. Reg. 38,560-01 (July 13, 2007).
[145] 7 U.S.C. § 916.
[146] *See* Letter from James M. Andrew, Administrator, Utilities Programs, to U.S. House Representative Henry A. Waxman, Chairman, Committee on Oversight and Government Reform (March 11, 2008), *available at* http://oversight.house.gov/documents/20080312104146.pdf. *See also* Steven Mufson, *Government Suspends Lending for Coal Plants*, WASH. POST, March 13, 2008, at D01 (indicates that the USDA is awaiting new guidance for the program, i.e. from the next administration and/or Congress).
[147] *City of Stilwell, Okl. v. Ozarks Rural Elec. Co-op. Corp.*, 79 F.3d 1038, 1044 (10th Cir. 1996), *remanded and aff'd*, 166 F.3d 1064 (10th Cir. 1999).
[148] 7 U.S.C. § 902, as amended by Pub. L. 110-234, 122 Stat 923 (May 22, 2008).
[149] *Id.* at § 904, as amended by Pub. L. 110-234, 122 Stat 923 (May 22, 2008).
[150] *See Id.* at § 904.
[151] *Id.* at. § 902.
[152] *Id.* at § 904.

3) Individual state consent is required to extend REA loans.[153]
4) The Secretary of Agriculture is required to apply DOE-created criteria for extending REA loans.[154]

Section 902 of the REA directs the USDA to assist borrowers desiring to implement conservation and renewable energy programs. The USDA is authorized to extend loans for both on and off grid applications. Section 904 authorizes the USDA to extend loans to a broad array of entities that are organized for the purpose of financing the construction and operation of generating plants, electric transmission and distribution lines or systems for the furnishing and improving of electric service to persons in rural areas, and authorizes the Secretary of Agriculture to set the terms and conditions for these loans. Section 904 extends state regulatory jurisdiction to loans made under the REA, thus requiring state consent for any loan to construct, modify, or enlarge any power generation facility. The REA *does not* authorize the USDA to regulate these energy projects. Regulatory powers remain with the States.[155] The Secretary of Agriculture is also not authorized to preempt state regulation;[156] however, state law is preempted by the REA when it conflicts with the Act.[157]

The REA establishes a relationship between the DOE and the USDA in administering the loan program by requiring the Secretary of Agriculture to take into account criteria established by the DOE when making or guaranteeing electric transmission and generation loans:

> ***In order to insure coordination of electric generation and transmission financing under this chapter with the national energy policy***, the Secretary in making or guaranteeing loans for the construction, operation, or enlargement of generating plants or electric transmission lines or systems, shall consider such general criteria consistent with the provisions of this chapter as may be published by the Secretary of Energy.[158]

Section 916 is a broad grant of authority to the DOE with no limits or specifications on what criteria can be promulgated. However, the legislative purpose of this section is to facilitate the DOE's development of a unified energy policy.[159]

The President has broad authority in planning national energy policy as established in Section II of this report. Specifically, pursuant to 42 U.S.C. § 7321, the President biennially prepares and submits to Congress a proposed National Energy Policy Plan (NEPP) along with a report.[160] In terms of establishing new loan criteria for REA loans, the DOE has broad discretion limited only by the purpose of the Act and coordination with national energy policy. Thus the President,

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[153] *Id.*
[154] *Id.* at § 916.
[155] *City of Stilwell, Okl.,* 79 F.3d at 1044.
[156] *Matter of Cajun Elec. Power Co-op., Inc.*, 109 F.3d 248 (5th Cir. 1997).
[157] *City of Morgan City v. South Louisiana Elec. Co-op. Ass'n*, 31 F.3d 319, 324 (5th Cir. 1994).
[158] 7 U.S.C. § 916 (*emphasis added*).
[159] *See* Department of Energy Organization Acts, Senate Report No. 95-164, 854, 920 (May 14, 1977).
[160] 42 U.S.C. § 7322.

through the energy policy, has some authority over the program as any criteria issued by the DOE should be consistent with the national policy.

In regard to the USDA prioritizing certain loans, the authorizing provisions of the REA give the Secretary of Agriculture broad authority to make loans to facilitate delivery of electricity to rural areas, to investigate the progress of rural electrification, and to support efforts by loan recipients to implement renewable energy systems, as well as to set the specific conditions under which REA loans are made.[161] The Secretary of Agriculture's discretion is limited by statutory language stipulating the purposes for which loans can be extended (financing the construction and operation of generating plants, electric transmission and distribution lines or systems for the furnishing and improving of electric service to persons in rural areas), the priorities for loans (priority is given to States, Territories, and subdivisions and agencies thereof, municipalities, peoples' utility districts, and cooperative, nonprofit, or limited-dividend associations), by the requirement that the Secretary of Agriculture certify that the loan recipient have adequate security to back up the loan, and by the requirement that the Secretary of Agriculture consider any loan criteria promulgated by the DOE as part of the DOE's efforts to develop a unified, national energy policy.[162] None of these limitations would prohibit the action contemplated by this proposal. In fact, the USDA, as part of any risk assessment performed to evaluate loan applications, could consider the financial risks associated with global warming as is done in the private sector. This would include potential costs that could result from climate-change legislation. [163] Although this would not be an explicit prohibition of coal power plants, the effect would probably be similar.

Renewable energy systems are primary targets for this loan program. Further, if the DOE issued criteria that prioritized renewable systems (as a strategy consistent with the national energy policy) the USDA would have to consider and apply the criteria. Application of priorities, however, must be within the context of the Act's purpose: facilitating extension of electric service to rural America.

In regard to the USDA prohibiting certain loans, the USDA has broad discretion in awarding loans under this program. However, the main purpose of the program is to facilitate the extension of electric service to rural America, and there is no explicit authority to prohibit loans that are otherwise qualified. DOE has broad discretion to issue criteria established pursuant to a national energy policy; however, any criteria regarding loan prohibitions would have to be balanced with the main purpose of the Act (and application by the USDA of such criteria must be consistent with the purpose of the Act).

Authority over the Agencies. The DOE and the USDA are executive departments.[164] In regard to executive departments, it is presumed that the President is constrained only by the requirement

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[161] *See* 7 U.S.C. §§ 902(a), 904.
[162] *Id.* at §§ 902, 904, 916; *see also* Department of Energy Organization Acts, Senate Report No. 95-164, 854, 920 (May 14, 1977).
[163] *See* Mufson *supra* at D01.
[164] 5 U.S.C. § 101.

that he "not direct any act beyond the bounds of an administrator's legal authority."[165] In terms of this proposal, the proposed actions are within the bounds of the two agencies' legal authority (given the clarification that proposed actions are taken consistent with the purpose of the Act); however, the relevant statutory delegations are directly to the DOE and the USDA. The USDA operates under criteria established by the DOE, and the criteria established by the DOE should be coordinated with national energy policy. The President has broad authority over planning national energy policy. Thus, in terms of this proposal it is within the President's authority to influence or direct the agencies through his key role in national energy planning. Note, however, that both the President and the agency secretaries must pursue action that is consistent with the purposes of the REA: facilitating the extension of electric service to rural America.

Executive Orders. There are no executive orders that relate directly to the REA published in the *Federal Register*. However, executive orders are used frequently to organize and coordinate agency programs and regulatory efforts with national policy. For example, E.O. 12898, issued Feb. 11, 1994, establishes a national policy of achieving environmental justice for minority populations and directs agencies to develop and implement strategies to address this policy which include adjustments to programs administered by the agencies to the extent permitted by law.[166]

Conclusion. Pursuant to the REA, the DOE is authorized to issue new criteria. Based on the REA and any new criteria, the USDA has the discretion and authority to prioritize loans as contemplated by the proposal. However, both in terms of establishing new criteria and implementing them, these actions must be pursued in a manner that is consistent with the purpose of the Act: to facilitate the extension of electric service to rural America. In terms of establishing criteria that would prohibit certain loans, this would also be authorized *as long as it can be done in a manner that is consistent with the purpose of the Act*. The President, pursuant to his authority to plan national energy policy, can direct the agencies to take actions consistent with the national policy. To avoid challenges based on a conflict with the REA, the President should explicitly include in the executive order that the order shall be implemented to the extent permitted by law (*i.e.*, criteria are established and applied in a manner consistent with the purposes of the Act to facilitate the extension of electric service to rural America).

Good candidate to implement by executive order, with clarification. Specific language suggested.

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[165] Peter M. Shane, *Independent Policymaking and Presidential Power: A Constitutional Analysis,* 57 GEO. WASH. L. REV. 596, 609 (1989); *See also* Boundaries Report, Chapter VI (It is said that executive agency heads serve "at the pleasure of the President" and, therefore, are under greater pressure to conform to the President's policy goals. Endnote omitted.).

[166] *See also*, *e.g.*, Exec. Order No. 13185 (Dec. 28, 2000) (directs agencies that support research at universities to regularly review existing policies and procedures to ensure that they meet the spirit and intent of the guiding and operating principles stated in the National Science and Technology Council report); Exec. Order No. 13134 (Aug. 12 1999) (organize efforts to support policy to develop and promote biobased products and bioenergy); Exec. Order No. 12866 (Sept. 30, 1993) ("Because Federal agencies are the repositories of significant substantive expertise and experience, they are responsible for developing regulations and assuring that the regulations are consistent with applicable law, the President's priorities, and the principles set forth in this Executive order.").

Direct the EPA to work with the Chicago Climate Exchange to design a program that permits utilities to trade efficiency credits, similar to cap-and-trade for carbon.

B-5

The President should direct the U.S. Environmental Protection Agency to work with the Chicago Climate Exchange to design a program that would permit utilities to trade efficiency credits – similar to cap-and-trade regimes proposed for greenhouse gas emissions – with the objective of helping utilities reduce energy demand at the lowest cost. PCAP Report 3:6.

Background.[167] In 2004, the Chicago Climate Exchange (CCX), an emissions trading platform regulating GHGs, was launched by more than 60 companies as a voluntary effort to reduce their individual emissions. The CCX is the first and only U.S. emissions trading system that requires a legally binding commitment for membership. Members, now totaling over 200, must pay a $50,000 entry fee and commit to reducing CO_2 or one of the five other GHGs. Members include businesses, non-governmental organizations and governmental entities including agencies, cities and two states.[168] The CCX is a private entity.

Statutes. Chapter II establishes that the President has a substantial role in planning energy and climate change policy. Essentially this proposal directs the EPA to provide a report or information on a proposal related to energy and climate change policy.

The EPA also has a substantial role in developing climate change policy. For example, pursuant to the Global Climate Protection Act of 1987: "The President, through the Environmental Protection Agency shall be responsible for developing and proposing to Congress a coordinated national policy on global climate change."[169] The EPA is a member of almost every working group, task force, committee and the like developing climate change policy, for example, the Climate Program Policy Board, 42 U.S.C. § 2904(e), the Committee on Earth and Environmental Sciences, 42 U.S.C. § 2932, the Federal Coordinating Council for Science, Engineering and Technology, 42 U.S.C. § 6651, and the Committee on Climate Change Technology, 42 U.S.C. § 13389(b). The Agency implemented and administers the Acid Rain Program under the CAA which includes a cap-and-trade system for SO_2.[170] The EPA developed, by rulemaking, a cap-

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[167] This section is largely from: Robert J. Keating, et. al, *Greenhouse Gas Emissions Trading: Emerging Markets and Opportunities for Colorado*, EESI, (March 15, 2007) at 30-31, *available at* http://www.colorado.edu/law/eesi/CO_GHG_Trading_Report.pdf, (hereinafter, "Keating"); The Chicago Climate Exchange website, http://www.chicagoclimatex.com/content.jsf?id=821; Chicago Climate Futures Exchange (a subsidiary of CCX), *Chicago Climate Futures Exchange CFI Futures* (August 16, 2007), *available at* http://www.ccfe.com/about_ccfe/products/cfi/CCFE_CFI_Overview.pdf.

[168] Members include: Ford Motors, DuPont, Baxter and Bayer, IBM, and Motorola; utility companies such as American Electric Power and Tampa Electric; institutions of higher education such as Tufts and the University of Minnesota; non-governmental organizations such as World Resources Institute and Rocky Mountain Institute; cities such as Chicago and Oakland; the Iowa and Nebraska Farm Bureaus; and even the states of New Mexico and Illinois.

[169] 15 U.S.C. § 2901 Note, § 1103 (b). *See also* 15 U.S.C. § 2938(b)(1).

[170] Codified at 42 U.S.C. §§ 7651-7661f; *see also* Keating, *supra* at 6-7.

and-trade scheme for mercury pursuant to section 111 of the CAA.[171] Under the current version of the CAA, the EPA will have substantial regulatory authority over GHGs once a determination on endangerment is made.[172] The EPA works with private industry on a number of related initiatives, for example, the Climate Leaders Program, which is an EPA partnership encouraging individual companies to develop long-term, comprehensive climate change strategies. Under this program, companies set corporate-wide emission reduction goals and inventory their emissions to measure progress. Thus, this proposal falls within the mission of the EPA.

Depending on the role of the CCX there may be requirements pursuant to the Federal Advisory Committee Act (FACA)[173] but nothing that would prohibit the action contemplated by this proposal. For example, if the intent is to obtain information or viewpoints from individuals as opposed to advice, opinions or recommendations from the group acting in a collective mode, FACA would not apply. In addition, the regularity of meetings is considered. The more static the group composition, the more likely FACA's applicability will arise. If FACA applies, meetings must be announced and open to the public and various documents must be made available to the public (in addition to a number of administrative and reporting requirements).[174]

Authority over the Entities Subject to the Directive. The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies generally, the President's authority over the EPA would be much the same as his authority over an executive department.[175] This proposal essentially directs the EPA to provide a report or information on a potential plan of action. This presidential action falls within the procedural supervisory authority over administrative officers as discussed in Chapter I.[176] Therefore, the President can demand information from and engage in consultation with agencies and their officers. This applies to all executive agencies across the board and would include, for example, demanding reports on various issues, even reports that suggest a preferred policy position.[177]

The CCX is a private entity and, as such, cannot be ordered to participate in this effort; however, there is no legal barrier to the voluntary participation by the CCX. Thus, the directive should ask the EPA to solicit the information and/or advice from the CCX.

Executive Orders. There are no executive orders published in the *Federal Register* that specifically include the CCX, but many contemplate public-private partnerships, that is, having representatives of the private sector work with federal agencies to provide advice on policy proposals or plans. This includes developing and drafting the proposals. The following are some examples of executive orders that establish committees or commissions with public and

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[171] The rule was struck down by a federal appeals court based on the delisting of mercury as a hazardous substance. *New Jersey v. Environmental Protection Agency (EPA),* 517 F.3d 574 (D.C. Cir. 2008). The court did not address the Agency's authority under section 111 to develop a cap-and-trade system as a performance standard for criteria pollutants that are not designated hazardous. *See* E-1.
[172] *See* Proposal B-7.
[173] 5 U.S.C. App. 2.
[174] *See* Proposal F.
[175] Boundaries Report, Chapter VI(1)(c).
[176] *See* Section I of this report; *see also* U.S. Const. Art. II, sect. 2.
[177] Kagan, *supra* at 2323-24.

private members: E.O. 12216, the President's Committee on the International Labor Organization; E.O. 13230, the President's Advisory Commission on Educational Excellence for Hispanic Americans; and E.O. 13177, the National Commission on the Use of Offsets in Defense Trade.

Conclusion. The President has the authority to direct the EPA to investigate and report on this proposal. In this regard, the proposals should be framed in terms of "reporting on," "recommending," and "advising." The CCX cannot be ordered to participate in this effort so the EPA should be asked to solicit CCX's participation, whether it is to provide advice (FACA implications) or information only. In terms of convention, a presidential memorandum should be considered as an alternative to an executive order.[178]

Good candidate to implement by executive order. Improvements suggested.

[178] Boundaries Report, Chapter II.

Direct the National Intelligence Council to conduct a National Intelligence Estimate on the security implications of continued dependence on imported oil, uranium, natural gas and other finite resources, given the prospect of peak oil and current trends in global supplies and demand of other critical, finite resources.

B-6

The National Intelligence Council reportedly is compiling a National Intelligence Estimate on climate change and security, due to be issued in the spring of 2008. The President should direct agencies with relevant responsibilities to prepare recommendations on consequence management and other security issues raised by the NIE, including how the United States, both domestically and internationally, should adapt to climate change that is underway or inevitable in the decades ahead.

If the coming NIE does not cover related issues of energy security, the President should request an assessment of the security implications of planned increases in the nation's reliance on imported finite fuels, including liquefied natural gas (LNG) and uranium. PCAP Report 4:6.

Background. The National Intelligence Council (NIC or Council) under the direction of the Director of National Intelligence (DNI or Director) prepares National Intelligence Estimates (NIE) and National Intelligence Assessments (NIA). The NIC was charged with preparing an assessment on the geopolitical and security implications of global climate change through an appropriation provision in S.B. 1538, the Senate's Intelligence Reauthorization Act for Fiscal Year 2008. This provision was not included in the final version of the bill that was passed into law.[179] However, based on a National Intelligence Priorities Framework review in 2006 and the 2007 congressional language, the Intelligence Community prepared an NIA on the National Security Implications of Global Climate Change to 2030.[180] Although the NIA is classified, testimony provided by Dr. Thomas Fingar, Chairman of the NIC, to the House Permanent Select Committee on Intelligence and House Select Committee on Energy Independence and Global Warming on June 25, 2008 was made public. One of the conclusions of the NIA is that "global climate change will have wide-ranging implications for US national security interests over the

[179] Senate Bill 1538, the Intelligence Reauthorization Act for Fiscal Year 2008, contains this provision in § 321; however, the Bill that has passed both houses of Congress, H.R. 2082, does not contain this provision.

[180] Statement for the Record of Dr. Thomas Fingar, Deputy Director of National Intelligence for Analysis and Chairman of the National Intelligence Council before the House Permanent Select Committee on Intelligence and the House Select Committee on Energy Independence and Global Warming, *National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030* (June 25, 2008) *available at* http://media.npr.org/documents/2008/jun/warming_intelligence.pdf. The difference between an NIE and an NIA is described in this testimony. The study for the NIA uses fundamentally different kinds of analytical methodology from what is typical for an intelligence product such as an NIE. The Intelligence Community depended upon open sources and greatly leveraged outside expertise. For example, since the Intelligence Community does not conduct climate research, they began the effort by looking for other U.S. government entities that were experts in this area. *Id* at 2.

next 20 years."[181] From the public testimony it does not appear that the NIA covers the specific issues contemplated by this proposal.

Statutes. The NIC supervises national intelligence estimates.[182] The NIEs are typically requested by senior civilian and military policymakers, congressional leaders and at times are initiated by the NIC. This is consistent with the Council's statutorily prescribed duties: "The National Intelligence Council shall, produce national intelligence estimates for the United States Government . . . ."[183] Further, the Council shall "otherwise assist the Director of National Intelligence in carrying out the responsibilities of the Director under section 403-1 of this title." Pursuant to section 403-1, the DNI is responsible for ensuring that national intelligence is provided to the President and other specified government parties.[184] Therefore, the President has the authority to order an NIE.

Authority over Agency. The President has significant authority over the DNI and through the DNI over the NIC. The President appoints the Director with the advice and consent of the Senate.[185] Further, the Director performs his or her principal responsibility as established by statute "subject to the authority, direction, and control of the President,"[186] and one of the Director's principle responsibilities is to "act as the principal adviser to the President, to the National Security Council, and the Homeland Security Council for intelligence matters related to the national security."[187] Although the President has substantial authority over the Director, it is not absolute. In addition to the Director's appointment being subject to the advice and consent of the Senate, it is statutorily specified that the Director "shall not be located within the Executive Office of the President."[188]

In turn, the Director has substantial authority over the NIC. "The National Intelligence Council shall be composed of senior analysts within the intelligence community and substantive experts from the public and private sector, who shall be appointed by, report to, and serve at the pleasure of, the Director of National Intelligence."[189] Further, the Director, who performs his or her principal statutory responsibility subject to the authority, direction, and control of the President, "shall ensure that the Council satisfies the needs of policymakers and other consumers of intelligence."[190]

Executive Orders. There are no executive orders published in the *Federal Register* directing the NIC to conduct an NIE. Based on convention, if an NIE is ordered by a formal executive

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[181] *Id.* at 4.
[182] 50 U.S.C. 403-3b(c)(1)(A).
[183] *Id.* at 403-3b(c)(1)(A).
[184] *Id.* at 403-1(a)(1) (The other government parties include the heads of departments and agencies of the executive branch; the chairman of the Joint Chiefs of Staff and senior military commanders; the Senate and House of Representatives and the committees thereof; and such other persons as the Director of National Intelligence determines to be appropriate.).
[185] 50 U.S.C. § 403(a)(1).
[186] *Id.* at § 403(a)(2).
[187] *Id.* at § 403(b)(2).
[188] *Id.* at § 403(a)(2). *See also* Boundaries Report, Chapter VI(1), Introductory material.
[189] 50 U.S.C. § 403-3b(b)(1).
[190] *Id.* at § 403-3b(c).

directive, a national security directive may be used; or if an executive order were issued instead, it would probably be classified.[191]

Conclusion. The President has the authority to direct the NIC to conduct an NIE or assessment on the security implications of climate change including the related issues of energy security such as those contemplated by this proposal. It does not appear from the limited information made public that these issues were included in the most recent assessment by the Intelligence Community. Depending on the resources available and the resources necessary to perform the NIE, there could be funding issues; this would require a request to Congress for an appropriation. Based on the content of the NIE, the President may want to consider issuing the directive, all or in part, in a classified manner, that is, with a classified presidential memorandum, executive order or national security directive.

Good candidate to implement by executive directive. Alternative form suggested.

[191] *See* Boundaries Report, Chapter II (especially section 9).

Direct the EPA to immediately begin regulating GHG emissions under the Clean Air Act.

B-07

Because there are no comparable greenhouse gas trading systems in place, experts are unsure of how successful the architecture will be or how soon its effects will appear in the marketplace. Some estimate that it will take a decade or more; others predict faster results. To ensure near-term emission reductions and to provide a safety net for the atmosphere, the President should order the EPA to expedite its determination that all greenhouse gas emissions meet the criteria for regulation under the Clean Air Act. PCAP Report 2:6.

Background. Regulation of GHGs under the CAA is the subject of Chapter VIII of the Boundaries Report. As a preliminary matter to be subject to regulation under the CAA, a substance must fall within the statutory definition of "air pollutant." The EPA has maintained that GHGs are not air pollutants and therefore has not regulated GHG emissions under the CAA. However, in August 2007, the Supreme Court ruled in *Massachusetts v. EPA* that GHGs are air pollutants as defined by the CAA.[192]

Statutes. To trigger regulation under the CAA, the EPA must find that a "pollutant" causes or contributes to "air pollution which may reasonably be anticipated to endanger public health or welfare; the presence of which in the ambient air results from numerous or diverse mobile or stationary sources . . . ."[193] If this finding is in the affirmative the substance is put on the air pollutant list. Once on the list, EPA regulates these substances through: (1) air quality standards; (2) stationary source standards; and (3) mobile source standards. It seems fairly clear based on the recital of scientific evidence in the Supreme Court decision and on the report released by the U.S. Climate Change Science Program on May 29, 2008, *Scientific Assessment of the Effects of Global Change on the United States*,[194] that a finding that GHG emissions endanger public health or welfare is unavoidable. However, there is a timing issue.

In the relevant provisions of the CAA, the EPA is required to revise pollutant lists and standards "from time to time."[195] Further, the Supreme Court held, in *Massachusetts v. EPA,* that "EPA no doubt has significant latitude as to the manner, timing, content, and coordination of its regulations with those of other agencies."[196] Subsequent direction by the current administration lacks timeframes or specifics as to the action EPA should take, and the EPA Administrator, in a letter dated March 27, 2008 to Senators Boxer and Inhofe, announced the Agency's intent to merely accept public comment rather than make an endangerment finding at this point.[197] Thus,

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[192] *Massachusetts v. EPA*, 127 S.Ct. 1438.
[193] 42 U.S.C. § 7408(a)(1).
[194] See Chapter II for a summary of the findings.
[195] *E.g.*, 42 U.S.C. § 7408(a)(1) (list); 42 U.S.C. § 7411(b)(1)(A) (stationary sources); 42 U.S.C. § 7521(a)(1)(mobile sources).
[196] *Massachusetts v. EPA,* 127 S.Ct. at 1462.
[197] *Bush Calls for Cuts in Vehicle Emissions: Agencies Ordered to Draft New Rules*, WASH. POST, May 15, 2007, at D1; Charlie Savage and Robert Pear, *White House Sets a June Deadline to Propose Rules*, N.Y. TIMES, May 31,

it is likely that a final determination on endangerment could still be left open when a new administration takes office.

The purposes of the CAA are found at 42 U.S.C. § 7401. The following is relevant to interpretation of the timing provisions:

> (b) Declaration
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> The purposes of this subchapter are--
> **(1)** to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;
>
> * * * * *
>
> (c) Pollution prevention
>
> A primary goal of this chapter is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this chapter, for pollution prevention.

Considering the timing provisions together with the purposes of the Act, and considering the scientific findings regarding climate change and the emission of GHGs, a reasonable position for the President to take is that in order to implement the CAA consistently with the stated purposes of the Act, action must be taken quickly.

EPA has also attempted to avoid regulation based on policy considerations. Technically the Court ruled in *Massachusetts v. EPA* that EPA can avoid taking regulatory action: 1) only if it determines that GHGs do not contribute to climate change (according to the Court this is what would be required to find that GHGs do not endanger); or 2) if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do.[198] In terms of the latter, EPA made a number of policy arguments which included: a number of voluntary executive branch programs already provide an effective response to the threat of global warming; regulating greenhouse gases might impair the President's ability to negotiate with key developing nations to reduce emissions; and curtailing motor-vehicle emissions would reflect an inefficient, piecemeal approach to addressing the climate change issue. The Court found that these arguments did not "amount to a reasoned justification for declining to form a

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2008, at A1 (White House chief of staff issues an executive directive in the form of a memorandum for EPA to limit GHG emissions as a pollutant under the CAA, as the Supreme Court ordered the agency to consider in 2007. "The agency has said its next step will be to invite public suggestions about what any rule should require.") Letter from EPA Administrator Johnson, re: action on GHG regulations, (Mar. 27, 2008) *available at* http://epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=48cc5c7d-56ef-426b-ba32-d027aad08eb6; *see also* Matt Madia, OMB Watch, *EPA Delays Greenhouse Gas Regulations*, (posted Mar. 28,2008) (asserts that EPA was positioning itself to make endangerment finding but, after sending draft documents to OMB, stopped).

[198] *Massachusetts. v. EPA,* 127 S.Ct. at 1462.

scientific judgment."[199] Further, by the terms of this decision there appears little room for the EPA to legitimately avoid taking regulatory action based on the latter part of the ruling. However, the next President could re-establish and clarify executive policy on this matter and thus preclude any policy justification for refusal to regulate.

Authority over the EPA. The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies generally, the President's authority over the EPA would be much the same as his authority over an executive department.[200] In terms of this specific proposal, the President has the authority to direct the EPA to take the necessary steps to make the endangerment finding immediately, considering: 1) the President's constitutional authority as the person vested with the power of the Executive Branch, his duty to take care the laws are faithfully executed, and his duty to preserve, protect and defend the Constitution, including for the purpose of promoting the general welfare;[201] 2) the Supreme Court decision in *Massachusetts v. EPA*; and 3) the science regarding climate change and GHG emissions. Further, assuming the finding is that GHGs do endanger, the President, based on the same considerations, can order the EPA to expedite the regulatory process to the extent permitted by law.[202] However, the President cannot make the finding of endangerment in place of the EPA Administrator.[203]

The President has substantial authority in planning energy and climate change policy, as established in Chapter II. Thus, the President has the authority to issue a policy statement that would preclude any policy argument that regulations should be postponed.

Executive Orders. There are numerous executive orders that direct agencies to begin work on a matter and to proceed expeditiously. For example, E.O. 13158 directs the EPA to begin rulemaking to address the protection of beaches, coasts, and the marine environment from pollution, and to expeditiously propose new regulations.[204] Further there are numerous executive orders that demand immediacy.[205]

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[199] *Id.* at 1462-64 (the quote is at1463).
[200] Boundaries Report, Chapter VI(1)(c).
[201] U.S. Const., Art. II, §§ 1, 3, and Art. I, *forward.*
[202]There are timelines set out for certain activities under the Act. *See* Boundaries Report, Chapter VIII(1).
[203] If the President orders the EPA to make a specific determination it is not enforceable and it falls within the category of overreaching by the President. The President's only recourse would be to discharge the Administrator and any future Administrator who did not make the specific finding on endangerment ordered.
[204] Exec. Order No. 13,158, sec. 2(f), 65 FR 34,909 (May 26, 2000); *see also*, e.g., Exec. Order Nos.: 13,274 ("[A]gencies shall to the maximum extent practicable expedite their reviews for relevant permits or other approvals, and take related actions as necessary . . ."); 13,212 (agencies shall expedite projects that will increase the production, transmission, or conservation of energy, expedite their review of permits or take other actions as necessary); 13,139 (expeditiously review waiver requests); 13,101 (expedite the process of designating items that are or can be made with recovered materials); 12,333 ("[P]rocedures required by this Order shall be established as expeditiously as possible"); 12,153 ("[T]he Secretary of Energy . . . shall expeditiously conduct a public inquiry as to what other types of heavy crude oil, if any, should be exempted from price controls . . .").
[205] *E.g.*, Exec. Order Nos.: 13,186 (agencies are "encouraged to immediately begin implementing the conservation measures set forth above . . ."); 13,271 ("[T]he Attorney General shall immediately establish within the Department of Justice a Corporate Fraud Task Force . . ."); 13,101 ("Agencies are encouraged to immediately test and evaluate the principles and concepts contained in the EPA's guidance on the Acquisition of Environmentally Preferable Products . . .").

Conclusion. Given the Supreme Court ruling in *Massachusetts v. EPA*, the President's constitutional authority, and the supporting science on this issue, the President has the authority to order the EPA to begin the regulatory process by making the determination on endangerment and to proceed on further regulation if the Agency determines that GHGs endanger. Further, there is substantial precedent for the President to issue an order demanding immediacy and for the EPA to move as expeditiously as possible under the law. Finally, to remove any potential barrier to action based on a policy argument, the executive order should re-establish and clarify policy on this issue.

Good candidate to implement by executive order, with a clarification. Improvements suggested.

Direct the EPA to immediately grant California's waiver for vehicle emissions standards.

B-08

The federal Clean Air Act allows California to set its own standards for greenhouse gas emissions from vehicles and permits other states to adopt the same standards if a waiver is granted by the Environmental Protection Agency. California adopted its own standards in 2002, and in 2005 asked the EPA to grant the waiver. Under the California standard, emissions from cars and light trucks must be cut 25% from 2005 levels by 2012, and 30% by 2016. Reductions of 18% are required for bigger trucks and SUVs.

Automakers sued, but in September 2007, a federal judge ruled that California's action was proper. Thirteen other states have said they intend to adopt California's standards. The EPA has said it will make a decision on whether to grant the required waiver by the end of 2007.

If the EPA has not granted the California waiver by the time the next President takes office, he or she should direct the agency to do so. PCAP Report 7:3-4.

Background. The waiver process is examined in Chapter VIII (1)(d) of the Boundaries Report. Since publication of the PCAP Report, the EPA has denied California's petition for the waiver.

Statutes. Section 209(a) of the CAA preempts a state from adopting its own motor vehicle emission control standards, but 209(b) requires the EPA to waive preemption for a standard that a state has determined will be at least as protective of public health and welfare as the applicable federal standards, unless the EPA Administrator finds that one of three conditions exist.[206] Further, if such a waiver is granted to California, any state which has nonattainment areas in its State Implementation Plan (SIP) may adopt and enforce the California standard.[207] The waiver provision is as follows:

> (b) Waiver
>
> (1) The Administrator shall, after notice and opportunity for public hearing, waive application of this section to any State which has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. No such waiver shall be granted if the Administrator finds that—

[206] 42 U.S.C. § 7543(b); 42 U.S.C. § 7543(e).
[207] *Id.* at § 7507.

> (A) the determination of the State is arbitrary and capricious,
>
> (B) such State does not need such State standards to meet compelling and extraordinary conditions, or
>
> (C) such State standards and accompanying enforcement procedures are not consistent with section 7521(a) of this title.[208]

Section 7521(a) authorizes the EPA Administrator to prescribe by regulation emission standards for new motor vehicles or new motor vehicle engines.

In 2005, California requested a preemption waiver from the EPA in order to put tougher standards into effect.[209] Subsequent to this request, and in anticipation of the waiver being granted, approximately 17 states have submitted to the EPA requests to adopt this standard. On December 19, 2007, two years after the request was made, the EPA set forth the Agency's intent to deny California's waiver request.[210] On February 29, 2008, the EPA Administrator signed a Federal Register Notice Denying a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles. This is the first time the EPA has denied a waiver request under the CAA.

Until this decision, the EPA had granted all 50 previous waiver requests over the last 40 years. California is appealing the decision in federal court.[211] A number of other States have joined in the Petition.

The Administrator found that California does not need the state standards to meet compelling and extraordinary conditions pursuant to 42 U.S.C. § 7543 b(1)(B).[212] The decision was based on the global nature of climate change. The Administrator concludes as follows:

> I have concluded that section 209(b) was intended to allow California to promulgate state standards applicable to emissions from new motor vehicles to address pollution problems that are local or regional. I do not believe section 209(b)(1)(B) was intended to allow California to promulgate state standards for emissions from new motor vehicles designed to address global climate change problems; nor, in the alternative, do I believe that the effects

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[208] 42 U.S.C. § 7543(b).
[209] *Request for Waiver of Federal Preemption*, 72 Fed. Reg. 21260 (2007).
[210] 73 CFR 12,156, *California State Motor Vehicle Pollution Control Standards; Notice of Decision Denying a Waiver of Clean Air Act Preemption for California's 2009 and Subsequent Model Year Greenhouse Gas Emission Standards for New Motor Vehicles* (Mar. 6, 2008), *available at*: http://www.epa.gov/otaq/ca-waiver.htm; copy of Letter from EPA Administrator to California Governor *available at*: http://www.cleancarscampaign.org/web-content/newsroom/docs/121907_EPALetter.pdf.
[211] On January 2, 2008, in separate petitions, California and 15 states—plus five environmental organizations—asked a federal court to reverse the December 19, 2007 U.S. EPA decision denying California a waiver to implement its Clean Cars law. The petitions were filed in the 9th Circuit of Appeals. *Petition*, California v. EPA, (9th Cir. filed January 2, 2008), *available at* http://www.cleancarscampaign.org/web-content/cleanairact/docs/n1514_epapetition-1.pdf.
[212] 73 CFR 12,156.

> of climate change in California are compelling and extraordinary compared to the effects in the rest of the country.[213]

This is a final action by the Agency. 42 U.S.C. § 7607 contemplates review of final administrative actions. Review of a final action pursuant to §7543 must be taken in federal circuit court. Section 7607 also contemplates a petition for reconsideration by the Administrator; however, there is no specific provision in the *Code of Federal Regulations* or pollution prevention statutes providing for reconsideration of a waiver denial under §7543.

Authority over the EPA. The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies, generally, the President's authority over the EPA would be much the same as an executive department.[214] In terms of this specific proposal, there are indicators that the President's authority is more limited. The CAA delegates responsibility for implementation of the CAA directly to the EPA. Further, section 7543(b) explicitly states that it is the Administrator of the EPA who shall make the determinations necessary for denying the waiver (see Statutes section above). Thus, the President can order the EPA to make a specific determination but it is not enforceable[215] and it falls within the category of overreaching by the President. However, the President can re-establish federal policy in this regard.

The Agency's determination is, in part, based on the view that a national problem such as global warming should have a national approach (i.e., the same standard in every state). The President has substantial authority in planning federal energy and climate change policy as discussed in Chapter II. The President could issue an executive order establishing a climate change policy that would encourage actions such as waivers for states that want to be more aggressive in their approach. Although the Agency has already taken final action on the waiver, such an executive order could impact any future reconsideration of the issue based on the outcome of the federal case, for example. On the other hand, the agency's decision is largely based on Agency interpretation of the statutory provision. Thus, if the federal court agrees with the agency interpretation, the outcome of the federal case may conclude this matter. A presidential policy shift will not provide the authority necessary to grant this particular waiver under section 7453(b).

Conclusion. This conclusion is subordinate to the outcome of the federal case. Any action taken by the President should be consistent with a federal ruling on the matter. First, the EPA Administrator has taken final action on the waiver. There is a statutory provision that delegates this determination specifically to the Administrator. The President cannot substitute his determination for that of the Administrator. However, the Administrator's determination was based, in part, on the Agency's view of national policy. The President can make clear, or re-establish through an executive directive, the policy of the U.S. in this regard. This could have bearing on the outcome of the federal case if it has not been decided when the next

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[213] 73 CFR 12,156.
[214] Boundaries Report, Chapter VI(1)(c).
[215] The President's only recourse would be to discharge the Administrator and any future Administrator who did not grant the waiver.

administration takes office or on reconsideration of the issue by the Agency if there are grounds for same.

Poor candidate to implement by executive order. Alternative action suggested.

Direct the EPA and DOE to collaborate with the American Truck Association to determine appropriate incentives to increase the use of wide-base tires.

B-09

DOE and the EPA should require that tires for heavy-duty trucks are replaced with wide-base tires, and direct the agencies to collaborate with the American Truck Association to determine appropriate incentives to increase the use of these tires. PCAP Report 7:7.

Background. This evaluation is limited to the second part of the proposal as quoted from the PCAP Report. According to test results from the National Transportation Research Center at the Oak Ridge National Laboratory (ORNL), tractor-trailers operating with single, wider tires recorded improved fuel efficiency numbers between 7.2 to 10 percent when compared to rigs operating on standard-sized dual tires.[216] The American Truck Association (ATA) is a private entity.

Statutes. Chapter II establishes that the President has a substantial role in planning energy and climate change policy. Essentially, this proposal directs agencies, specifically the DOE and the EPA, to provide a report or information on a proposal related to energy and climate change policy. Providing incentives for the use of wide-base tires will decrease fuel consumption and thus reduce GHG emissions and dependence on foreign oil.

The EPA also has a substantial role in developing climate change policy and works with private industry on a number of initiatives, as set forth in Proposal B-5 (statutes section).

The DOE also has a substantial role in developing energy and climate change policy. For example, the DOE develops the least-cost energy strategy (LCES) which is included in the President's National Energy Policy Plan.[217] The DOE is a member of almost every working group, task force, committee and the like developing climate change policy; *see, e.g.*, the Climate Program Policy Board, 42 U.S.C. § 2904(e), the Committee on Earth and Environmental Sciences, 42 U.S.C. § 2932, the Federal Coordinating Council for Science, Engineering, and Technology, 42 U.S.C. § 6651, the Committee on Climate Change Technology, of which the Secretary is also the Chair, 42 U.S.C. § 13389(b), etc. The DOE is the primary agency for

[216] American Association for the Advancement of Science, Eureka Alert, *Story Tips from ORNL*, May 2008, *available at* http://www.eurekalert.org/pub_releases/2008-05/drnl-stf050108.php. The research is funded by the U.S. Dept. Of Energy's Office of FreedomCAR and Vehicle Technologies. Oak Ridge National Laboratory's Center for Transportation Analysis, News Release (Jan. 23, 2008), *available at* http://cta.ornl.gov/cta/News.shtml.

[217] 41 U.S.C. § 13382(a) (The priorities of the LCES include energy conservation, stabilization and reduction of GHGs, increasing energy efficiency, increasing the use of renewable resources, and reducing national oil consumption.).

implementing energy plans and programs, including those that develop and deploy energy technologies.[218]

The DOE administers the Office of FreedomCAR and Vehicle Technologies which funded the study by ORNL that assessed the fuel efficiency advantages of new generation single wide-based tires compared to conventional tandem tires. The mission of the Vehicle Technologies Program, as self reported, is to strengthen energy security, environmental quality, and economic vitality through public-private partnerships. Program professionals work with industry leaders to develop and deploy advanced transportation technologies with the goal of improving vehicle fuel efficiency and displacing oil with other fuels. The Program supports and works through the 21st Century Truck Partnership. Thus, this proposal falls within the mission of the EPA and DOE.

Depending on the role of the ATA, there may be requirements pursuant to the Federal Advisory Committee Act (FACA),[219] but nothing that would prohibit the action contemplated by this proposal. For example, if the intent is to obtain information or viewpoints from individuals, as opposed to advice, opinions or recommendations from the group acting in a collective mode, FACA would not apply. In addition, the regularity of meetings is considered. The more static the group composition, the more likely FACA's applicability will arise. If FACA applies, meetings must be announced and open to the public and various documents must be made available to the public (in addition to a number of administrative and reporting requirements).[220]

Authority over the Entities Subject to the Directive. The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies, generally, the President's authority over the EPA would be much the same as an executive department.[221] The DOE is an executive department.[222] In regard to executive departments, it is presumed that the President is constrained only by the requirement that he "not direct any act beyond the bounds of an administrator's legal authority."[223]

This proposal essentially directs the agencies to provide a report or information on a potential plan of action. This falls within the procedural supervisory authority over administrative officers as discussed in Chapter I.[224] This enables the President to demand information from, and engage in consultation with, agencies and their officers. This applies to all executive agencies across the board and would include, for example, demanding reports on various issues, even reports that suggest a preferred policy position.[225]

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[218] *See, e.g.*, 42 U.S.C. Chapter 84, Department of Energy.
[219] 5 U.S.C. App. 2.
[220] *See* Proposal F.
[221] Boundaries Report, Chapter VI(1)(c).
[222] 5 U.S.C. § 101.
[223] Peter M. Shane, *Independent Policymaking and Presidential Power: A Constitutional Analysis,* 57 GEO. WASH. L. REV. 596, 609 (1989); *see also*, Boundaries Report, Chapter VI (It is said that executive agency heads serve "at the pleasure of the President" and therefore are under greater pressure to conform to the President's policy goals. *Endnote omitted*.).
[224] See Boundaries Report, Chapter 6 (especially sections 1 and 4); *see also*, U.S. Const. Art. II, sect. 2.
[225] Kagan, *supra* at 2323-24.

The ATA is a private entity, and as such, cannot be ordered to participate in this effort. However, there is no legal barrier to the voluntary participation by the industry. Thus, the directive should ask the agencies to solicit the information and/or advice from the trucking industry.

Executive Orders. There are no executive orders published in the *Federal Register* that specifically include the ATA but many contemplate public private partnerships, that is, having representatives of the private sector work with federal agencies to provide advice on policy proposals or plans. This includes developing and drafting the proposals. The following are some examples of executive orders that establish committees or commissions with public and private members: E.O. 12216, the President's Committee on the International Labor Organization; E.O. 13230, the President's Advisory Commission on Educational Excellence for Hispanic Americans; and E.O. 13177, the National Commission on the Use of Offsets in Defense Trade.

Conclusion. The President has the authority to direct the agencies to investigate and report on this proposal. The ATA cannot be ordered to participate in this effort so the agencies should be asked to solicit the ATA's participation, whether it is to provide advice (FACA implications) or only information. In terms of convention, a presidential memorandum should be considered as an alternative to an executive order.[226] As part of the directive, the President should consider requiring the agencies to identify those incentives that can be implemented under current authority and those that will need statutory changes.

Good candidate to implement by executive order. Improvements suggested.

[226] Boundaries Report, Chapter II.

Direct the DOT to develop a Freight Task Force to propose incentives for making GHG reduction technologies more readily available to freight movement providers, to add GHG reduction as an eligible activity for incentives under EPA's Voluntary Diesel Retrofit Program, and to create a plan to change grade and signaling system requirements so that railways can safely accommodate lighter trains that use less fuel.

B-10

DOT should develop a Freight Task Force to propose incentives for making greenhouse gas-reduction technologies readily available to freight movement providers, to add CO_2 reduction as an eligible activity to qualify for incentives through the EPA's Voluntary Diesel Retrofit Program, and to draft a plan to change grade and signaling-system requirements so that railways can safely accommodate lighter trains that use less fuel. PCAP Report, 7:7.

Background. The authority to establish task forces by executive order is addressed in Proposal F of this report.

Statutes. 49 U.S.C. § 101 describes the purpose of the Department of Transportation (DOT). The subject matter of this proposal falls within the DOT's mission. Further, rail programs, including high-speed rail, are administered by the DOT.[227] The Federal Railroad Administration (FRA) is an administration in the DOT created to carry out all railroad safety laws of the United States. See Proposal B-13.

The task force contemplated by this proposal is a public-private partnership and would serve an advisory purpose, thus the Federal Advisory Committee Act (FACA) would apply. FACA does not restrict the President's authority to establish committees; it includes administrative and procedural requirements related to, for example, notice and public access. See Proposal F.

Authority over the Agency. The DOT is an executive department.[228] In regard to executive departments, it is presumed that the President is constrained only by the requirement that he "not direct any act beyond the bounds of an administrator's legal authority."[229] In terms of this specific proposal, directing agency participation in a task force that will provide advice or information to the President is well within the President's authority.[230]

Executive Orders. Executive orders are commonly used to establish initiatives, task forces, working groups, etc. For example, E.O. 13134,[231] Developing and Promoting Biobased Products

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[227] See 49 U.S.C. Subtitle V, Rail Programs, § 2010 et. seq. (see Part D for High-Speed Rail).
[228] 5 U.S.C. § 101.
[229] Peter M. Shane, *supra* at 609; *see also*, Boundaries Report, Chapter VI (It is said that executive agency heads serve "at the pleasure of the President" and, therefore, are under greater pressure to conform to the President's policy goals. Endnote omitted).
[230] This falls within "procedural" supervisory authority over administrative officers. See Boundaries Report, Chapter VI(4).
[231] Exec. Order No. 13,134, 64 Fed. Reg. 44,639 (Aug. 12, 1994).

and Bioenergy, establishes an interagency council and an Advisory Committee on Biobased Products and Bioenergy. The interagency council is composed entirely of federal employees; the advisory committee has members from both the federal government and private sector.

Conclusion. The President has the authority to establish a task force comprised of federal agencies and private entities that would provide information and advice. The subject matter of the task force is within the mission of the DOT. There are no barriers to taking this action by executive order although the provisions of FACA would probably apply. These are largely administrative and procedural provisions related to, for example, notice and public access.

Good candidate to implement by executive order.

Direct the DOT, the Department of Aviation and the Federal Rail Administration to determine if current rail-safety requirements are relevant for high-speed rail technology.

B-11

DOT, Department of Aviation and the Federal Rail Administration should investigate current rail safety requirements and analyze if current regulations are relevant when using high-speed rail technology. PCAP Report 7:7.

Background. In addition to its implications as a climate change strategy, high-speed rail is being considered as a strategy to relieve aviation congestion. The Federal Aviation Administration (FAA) is the federal department of aviation.

Statutes. The Federal Railroad Administration (FRA) is an administration in the Department of Transportation (DOT) created to carry out all railroad safety laws of the United States. The Secretary of Transportation ("the Secretary") is responsible for all acts taken under those laws and for ensuring that the laws are uniformly administered and enforced among the safety offices.[232] The Administrator carries out the duties and powers related to railroad safety vested in the Secretary by 49 U.S.C. § 20134(c) (demonstration projects for grade crossings), 49 U.S.C. §§ 203-211 (the safety provisions for rail programs), and 49 U.S.C. § 213 (enforcement provision) in carrying out the powers and duties related to safety. The Administrator also carries out additional duties and powers prescribed by the Secretary.[233]

The purpose of the FRA, as self-reported, is to: promulgate and enforce rail safety regulations; administer railroad assistance programs; conduct research and development in support of improved railroad safety and national rail transportation policy; provide for the rehabilitation of Northeast Corridor rail passenger service; and consolidate government support of rail transportation activities.[234] By statute, high-speed rail is under the authority of the Secretary.[235] Thus, this proposal falls within the mission of the FRA and the DOT.

The FAA is a division of the Department of Transportation.[236] It is an agency of the DOT with the authority to regulate and oversee all aspects of civil aviation in the U.S.[237] There is not a clear connection between the mission of the FAA and rail safety. However, rail transportation systems would be used to transport people to and from airports, and airports may serve as hubs.

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[232] 49 U.S.C. § 103(a).
[233] *Id.* at § 103(c).
[234] FRA Web site, *About Us, available at* http://www.fra.dot.gov/us/content/2 (no update date provided).
[235] 49 U.S.C. §§ 26101-26105.
[236] *Id.* at § 106(a).
[237] *See Id.* at § 106(f).

Authority over the Entities Subject to the Directive. The DOT is an executive department.[238] In regard to executive departments, it is presumed that the President is constrained only by the requirement that he "not direct any act beyond the bounds of an administrator's legal authority."[239] Similarly, the President has substantial authority over the FRA and the FAA. The head of the FRA is the Administrator, who is appointed by the President, by and with the advice and consent of the Senate. Further, the Administrator reports directly to the Secretary.[240] Likewise, the Administrator of the FAA is appointed by the President, by and with the advice and consent of the Senate, and also reports directly to the Secretary.[241]

In terms of this proposal, it essentially directs the agencies to provide a report or information on a potential plan of action. This falls within the procedural supervisory authority over administrative officers as discussed in Chapter I.[242] This enables the President to demand information from, and engage in consultation with, agencies and their officers. This applies to all executive agencies across the board and would include, for example, demanding reports on various issues, even reports that suggest a preferred policy position.[243]

Executive Orders. There are only two executive orders published in the Federal Register that explicitly name the FRA (E.O. 11382 and 11581); neither is relevant to this proposal. There are a number of executive orders that require agencies to examine or review the laws and regulations that they are responsible for implementing. Some relate to compliance with statutory programs. For example, E.O. 13078 requires the DOT and other agencies to examine their programs to see if they can be used to create new work incentives and to remove barriers to work for adults with disabilities.[244] Others relate to compliance with a general policy as declared by the President. For example, E.O. 13266 directs the DOT and other agencies to review and evaluate the policies, programs, and regulations of their respective departments and offices that in any way relate to the personal fitness of the general public. Based on that review, the Secretaries and the Director shall determine whether existing policies, programs, and regulations of their respective departments and offices should be modified or whether new policies or programs could be implemented.[245]

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[238] 5 U.S.C. § 101.

[239] Shane, *supra* at 609; *see also*, Boundaries Report, Chapter VI (It is said that executive agency heads serve "at the pleasure of the President" and, therefore, are under greater pressure to conform to the President's policy goals. Endnote omitted.).

[240] 49 U.S.C. § 103(b).

[241] *Id.* at § 106(b).

[242] *See* Boundaries Report, Chapter 6 (especially sections 1 and 4); *see also*, U.S. Const. Art. II, sect. 2.

[243] Kagan, *supra* at 23-24.

[244] *See also, e.g.*, Exec. Order No. 12320 (a review by every Executive agency of its programs to determine the extent to which historically Black colleges and universities are given an equal opportunity to participate in Federally sponsored programs); Exec. Order No.12953 (specified agencies shall conduct a full review of current policies and practices to comport with child support act).

[245] *See also, e.g.*, Exec. Order No. 13185 (executive branch departments or agencies that support research at universities to regularly review its existing policies and procedures to ensure that they meet the spirit and intent of the guiding and operating principles stated in the National Science and Technology Council report); Exec. Order No. 12606 (Executive departments and agencies shall identify proposed regulatory and statutory provisions that may have significant potential negative impact on the family well-being); Exec. Order No. 13045 (all agencies shall ensure that policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks).

Conclusion. This proposal is consistent with the mission of the FRA and the DOT. As rail systems would connect up with airports, the FAA also has a role. The President has the authority to direct the agencies to investigate and report on this proposal. In terms of convention, a presidential memorandum should be considered as an alternative to an executive order.[246]

Good candidate to implement by executive order. Improvements suggested.

[246] Boundaries Report, Chapter II.

Direct the DOT to reconvene the Climate VISION Program, in which 14 major industrial sectors worked with federal agencies to develop support for high-speed rail.

B-12

2. Create lower emission options for intercity travel.

The President should direct that federal funding for high-speed rail projects be allocated through the Congestion Mitigation and Air Quality Improvement Program (CMAQ) and propose additional dollars for the program in the fiscal year 2010 budget submission to Congress. DOT, Department of Aviation and the Federal Rail Administration should investigate current rail safety requirements and analyze if current regulations are relevant when using high-speed rail technology. DOT should reconvene the Climate VISION Program, a partnership of 14 major industrial sectors working with federal agencies to develop a strategy for private support of high-speed rail. . . . PCAP Report 7:8.

Background. Voluntary Innovative Sector Initiatives: Opportunities Now (Climate VISION) is a presidential public-private partnership initiative launched by the Department of Energy in February 2003. Twelve major industrial sectors and the membership of the Business Roundtable committed to work with four of cabinet agencies (DOE, EPA, DOT, and USDA) to reduce greenhouse gas emissions in the next decade. Participating industries made a commitment to contribute to meeting an 18 percent intensity reduction goal by improving energy efficiency or the greenhouse gas emissions intensity of its sector.[247]

The railroad industry is one of the 15 private sector initiatives in the Climate Vision program. The railroad industry's effort was moved to the EPA's SmartWay Transport Partnership, which is focused on surface transportation. This is a voluntary program aimed at reducing emissions from the freight sector through the implementation of innovative technologies and advanced management practices. To date, about 430 companies and organizations have joined the partnership and have committed to reduce the CO_2 emissions associated with their freight operations. Currently, rail efforts "highlight practical opportunities where rail can be better utilized and to encourage more efficient rail operations and technical innovation," such as engine-idling reduction projects.[248]

The PCAP proposal seeks to convene a public-private partnership within this effort to address high-speed rail and give the DOT a more prominent role.

Statutes. 49 U.S.C. §101 describes the purpose of the DOT. The subject matter of this proposal falls within the DOT's mission. Further, rail programs, including high-speed rail, are administered by the DOT.[249] The Federal Railroad Administration (FRA) is an administration in the DOT created to carry out all railroad safety laws of the United States. See Proposal B-13.

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[247] Climate Vision, *available at* http://www.climatevision.gov/mission.html.
[248] EPA's SmartWay, *available at* http://www.epa.gov/smartway/.
[249] *See* 49 U.S.C. Subtitle V, Rail Programs, § 2010 et. seq. (see Part D for High-Speed Rail).

The DOT is already a partner in this initiative. To give the DOT a more prominent role, the President should give the DOT more authority within the effort or move the effort from the EPA to the DOT. Either could be done by executive directive as the program is a presidential initiative and not statutory. It was moved by agreement of the DOE and the transportation sector partners from the DOE to the EPA.

It is a public-private partnership and would serve an advisory purpose thus the Federal Advisory Committee Act (FACA) would apply. FACA does not restrict the President's authority to establish committees; it includes administrative and procedural requirements related to, for example, notice and public access. See Proposal F.

Authority over the Agencies. The DOT is an executive department, as are two of the other agency partners, the DOE and the USDA.[250] In regard to executive departments, it is presumed that the President is constrained only by the requirement that he "not direct any act beyond the bounds of an administrator's legal authority."[251] The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies, generally, the President's authority over the EPA would be much the same as an executive department.[252] In terms of this specific proposal, directing agency participation in task forces or working groups that will provide advice or information to the President is well within the President's authority,[253] notwithstanding the fact that that the agencies already participate in this effort.

Executive Orders. Executive orders are commonly used to establish initiatives, task forces, working groups, etc. For example, E.O. 13134, Developing and Promoting Biobased Products and Bioenergy, establishes an interagency council and an Advisory Committee on Biobased Products and Bioenergy.

Conclusion. This proposal is, in essence, directing the establishment of a working group, or task force comprised of federal agencies and private entities. There are no barriers to taking this action by executive order although the provisions of FACA would probably apply. These are largely administrative and procedural provisions related to, for example, notice and public access.

Good candidate to implement by executive order.

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[250] 5 U.S.C. § 101.
[251] Shane, *supra* at 609; *see also*, Boundaries Report, Chapter VI (It is said that executive agency heads serve "at the pleasure of the President" and, therefore, are under greater pressure to conform to the President's policy goals. Endnote omitted.).
[252] Boundaries Report, Chapter VI(1)(c).
[253] This falls within "procedural" supervisory authority over administrative officers. *See* Boundaries Report, Chapter VI(4).

Direct NASA to restore earth science language in the agency's mission statement and priorities.

B-13

2. Restore the government's earth sciences mission.

In February 2006, top officials at NASA changed the agency's mission statement to remove a passage that stated NASA should not only "explore the universe and search for life," but also "understand and protect our home planet." The next President should restore the deleted passage and what it symbolizes: the federal government's commitment to better understand the Earth's ecosystems, how to protect them and how they now are changing. PCAP Report 11:3.

Background. See excerpt from PCAP Report above.

Statutes. The President determines whether a space or aeronautical activity is military or not—non-military activities fall under NASA's mandate.[254] Congress has established, by statute, the possible objectives for NASA:

> (d) Objectives of aeronautical and space activities
>
> The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:
>
> (1) *The expansion of human knowledge of the Earth and of phenomena in the atmosphere* and space;
>
> (2) The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles;
>
> (3) The development and operation of vehicles capable of carrying instruments, equipment, supplies, and living organisms through space;
>
> (4) The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes;
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> .
> .
> .
>
> [Objectives 5-9 Omitted][255]

[254] 42 U.S.C. § 2451(b).
[255] *Id.* at § 2451 (d) (emphasis added).

As explained in the next subsection, the Administrator of NASA explicitly operates under the supervision and direction of the President.[256] There is also a National Space Council. It is established by the President, reports to the President, supports the President in setting policy, is located in the EOP and is chaired by the Vice President.[257] Through this statutory arrangement the President has the authority to set NASA's priorities and objectives.

Authority over the Agency. NASA is neither an executive department nor an independent agency. However, NASA is headed by an Administrator who is appointed from civilian life by the President by and with the advice and consent of the Senate.[258] "*Under the supervision and direction of the President*, the Administrator shall be responsible for the exercise of all powers and the discharge of all duties of the Administration, and shall have authority and control over all personnel and activities thereof."[259] Based on this language, the President has extensive authority over NASA.[260] In terms of this specific proposal, the President has the authority to establish the agency's objectives, including the mission statement. According to NASA's 2006 strategic plan, NASA's objectives were redefined as a result of direction from the White House, i.e. a document entitled, "A Renewed Spirit of Discovery" issued by the White House in 2004.[261]

Executive Orders. Pursuant to 43 U.S.C. § 4271, the President is to establish, and determine the composition and functions of a National Space Council in the EOP. On April 20, 1989, President George H. Bush issued E.O. 12675, establishing the National Space Council. According to this order, "[t]he Chairman shall serve as the President's principal advisor on national space policy and strategy," "shall report to the President on the activities and recommendations of the Council," and "shall advise the Council as appropriate regarding the President's directions with respect to the Council's activities and national space policy generally." This is consistent with the President's extensive authority over NASA.

Conclusion. Based on the statutory arrangement regarding NASA, the President has authority to establish the objectives and priorities for the agency. By statute, one of the permitted objectives is "the expansion of human knowledge of the Earth and of phenomena in the atmosphere. . . ."[262] Thus, the President has the authority to direct NASA to amend its mission statement as contemplated by this proposal.

Good candidate to implement by executive order.

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[256] 42 U.S.C. § 2472(a).
[257] *Id.* at § 2471(a), (b); Exec. Order No. 12675 (April 20, 1989).
[258] *See* Boundaries Report, Chapter VI (especially section 2, President's Removal Power).
[259] 42 U.S.C. § 2471(a) (emphasis added).
[260] Boundaries Report, Chapter VI(1)(c).
[261] NASA's 2006 Strategic Plan, *available at* http://www1.nasa.gov/pdf/142302main_2006_NASA_Strategic_Plan.pdf. The White House report, *available at* http://www.whitehouse.gov/space/renewed_spirit.html.
[262] 42 U.S.C. § 2451 (d)(1).

Direct the Council on Environmental Quality (CEQ) to enter into talks with Congressional leaders to define "climate change emergency."

B-14

Even the scientific community has not anticipated the speed or diversity of climate impacts that now are underway, including "positive feedback loops" and the speed of melting in Greenland and the Arctic. Because impacts may unfold at rates and in ways that no one can predict, and because a faster federal response may be needed than Congress is equipped to deliver, the President should request that Congress delegate sufficient authorities for the Executive Branch to be flexible and adaptive. These authorities will help avoid conflicts between the three branches of government and the protracted delays that conflicts would cause. For example: . . .

- *Following the FDR model the President should work with Congress to specify the Administration's emergency authorities related to global climate change and the circumstances under which those authorities will take effect.* PCAP Report 14:6.

Background. The FDR model, based on President Franklin Delano Roosevelt's use of executive authority during the Great Depression and World War II, is discussed at length in Chapter 5 of the Boundaries Report (section B(3)).

Statutes.[263] The duties of the CEQ and the Office of Environmental Quality, which provides the professional and administrative staff for the CEQ, are based on assisting and advising the President on policies and programs of the Federal government affecting environment quality.[264] The Council must be apprised of agency actions having environmental consequences. Its purpose is to take information and to coordinate reporting of governmental activities so as to aid policy makers. As part of its duties the CEQ shall "make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request."[265] This falls within the mission of the CEQ.

Authority over the Agency.[266] The CEQ is located in the Executive Office of the President. The members are appointed by the President and serve at his pleasure, with the advice and consent of the Senate, and the President chooses the chair.[267] The duties of the CEQ are explicitly tied to assisting the President.[268] Thus, the authority of the President is at its peak over an entity such as the CEQ.[269]

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[263] See Proposal E-2 for a more detailed analysis.
[264] 42 U.S.C. § 4355 (Council); 42 U.S.C. § 4372(d) (Office).
[265] *Id.* at § 4344(8).
[266] See E-2 for a more detailed analysis.
[267] 42 U.S.C. § 4342.
[268] In carrying out his functions as the Director of the Office, the Chairman of the CEQ "shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality." 42 U.S.C. § 4372(d). See also, 42 U.S.C. § 4344.
[269] See Boundaries Report, Chapter VI, Intro., 1(b), 1(c).

Conclusion. The President has the authority to issue this directive. The subject matter falls within the CEQ's mission and the President's authority over the CEQ is substantial. Based on convention, the President should consider issuing the directive by presidential memorandum.[270]

Good candidate to implement by executive directive. Alternative form suggested.

[270] See Boundaries Report, Chapter II(1), (3).

C. Improve Federal Stewardship

Direct agencies to include carbon impact statements in their submissions to OMB, legislative proposals and reports to Congress and the American people.

C-1

6. Make greenhouse gases visible and climate action personal.

Greenhouse gas emissions should become a more visible factor for policymakers and consumers. The President should:

- *Require federal agencies to include climate impact statements in their annual budget submissions and performance evaluations;*
- *Direct agencies to address climate impacts in relevant reports to Congress and to the American public. . . .* PCAP Report 2:7.

Background. There are three parts to this proposal, including impact statements: 1) in budget submissions; (2) in legislative proposals and reports to Congress; and (3) in communications "to the American people."

Much of the work of executive oversight takes place within the organizations which comprise the Executive Office of the President (EOP). The EOP includes not only the President's personal advisors, who comprise the White House Office, but also permanent organizations. The most important of these units to the regulatory agencies is the Office of Management and Budget (OMB), which has the primary responsibility of formulating the annual executive budget which the President transmits to Congress. The OMB receives budget requests from the individual agencies and modifies them in accordance with the Administration's priorities. The OMB also reviews the agencies' requests for substantive legislation, including agency officials' proposed testimony before congressional committees, for consistency with the Administration's position. Both of these procedures give rise to extensive negotiations between OMB staff and agency officials. Usually, a compromise is reached but major disagreements are sometimes resolved by the President.[271]

Statutes and Agency Regulations. The President's authority over the federal executive budget is broad. The procedure required is found in the Congressional Budget and Impoundment Control Act of 1974 (the Budget Act).[272] Pursuant to the Budget Act, "The President shall prepare budgets of the United States Government . . . ."[273] Further, "[e]xcept as provided in this

[271] See Boundaries Report, Chapter VI(3).
[272] Codified at 31 U.S.C. §§ 1103 et. seq. (formerly the Budget and Accounting Procedures Act of 1950).
[273] 31 U.S.C. § 1104(a).

chapter, the President shall prescribe the contents and order of statements in the budget . . . ."[274] In terms of information requests, again the President's authority is quite broad:

> Under regulations prescribed by the President, each agency shall provide information required by the President in carrying out this chapter. The President has access to, and may inspect, records of an agency to obtain information.[275]
>
> * * * * *
>
> The head of each agency shall prepare and submit to the President each appropriation request for the agency. The request shall be prepared and submitted in the form prescribed by the President under this chapter and by the date established by the President. When the head of an agency does not submit a request by that date, the President shall prepare the request for the agency to be included in the budget or changes in the budget or as deficiency and supplemental appropriations. The President may change agency appropriation requests. Agency appropriation requests shall be developed from cost-based budgets in the way and at times prescribed by the President. The head of the agency shall use the cost-based budget to administer the agency and to divide appropriations or amounts.[276]

Although the President's authority is quite broad, he must comply with the details of the Budget Act and specific requirements of other legislation as applicable.[277] It is not clear if there is any limit on informational requests the President can make in terms of budget preparation. Note, however, that an information request regarding cost to the United States Government would be squarely within the President's authority,[278] and it is an accepted policy to include environmental costs when determining total cost to the nation.[279]

Legislative coordination and clearance with the OMB is established by OMB Circular No. A-15.[280] This Circular outlines procedures for the coordination and clearance by the OMB of agency recommendations on proposed, pending, and enrolled legislation. It also includes instructions on the timing and preparation of agency legislative programs:

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[274] *Id.* at § 1104(b).
[275] 42 U.S.C. § 1104(e).
[276] 31 U.S.C. § 1108(b)(1).
[277] *See Common Cause v. Nuclear Regulatory Commission*, 674 F.2d 921 (C.A.D.C. 1982) (President's authority under budget appropriations statute to prescribe rules and regulations for preparation of budget was subject to specific requirements of government in the Sunshine Act, § 552b of Title 5).
[278] 31 U.S.C. § 1111.
[279] *See, e.g.* 42 U.S.C. § 13401(2) ("It is the goal of the United States . . . to increase the efficiency of the economy by meeting future needs for energy services at the lowest total cost to the Nation, including environmental costs, ..."); Exec. Order No. 13101, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition (September 14, 1998).
[280] OFFICE OF MGMT. & BUDGET, CIRCULAR NO. A-19, *Legislative Coordination and Clearance* (as revised Sept. 20, 1979), *available at* http://www.whitehouse.gov/omb/circulars/a019/a019.html (hereinafter "OMB Circular No. A-19")

> 3. **Background.**
>
> OMB performs legislative coordination and clearance functions to (a) assist the President in developing a position on legislation, (b) make known the Administration's position on legislation for the guidance of the agencies and information of Congress, (c) assure appropriate consideration of the views of all affected agencies, and (d) assist the President with respect to action on enrolled bills.
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> * * * * *
>
> 7. **Submission of agency proposed legislation and reports.**
>
> **a. Submission to OMB.** Before an agency transmits proposed legislation or a report (including testimony) outside the Executive branch, it shall submit the proposed legislation or report or testimony to OMB for coordination and clearance.[281]

The Circular specifically states that one of the items to be included in agency submissions is "information required by statute or by Administration policies."[282]

5 U.S.C.A. § 552b is the federal open meetings law. It provides that meetings of government agencies shall be open to the public. Although it applies only to meetings, it includes a declaration of policy that is instructive:

> It is hereby declared to be the policy of the United States that the public is entitled to the fullest practicable information regarding the decision making processes of the Federal Government. It is the purpose of this Act to provide the public with such information while protecting the rights of individuals and the ability of the Government to carry out its responsibilities.[283]

Authority over Agencies. The President's budget authority extends to executive departments and independent agencies.[284] All executive branch agencies, including independent agencies, are subject to the provisions of OMB Circular A-19, except those agencies that are specifically required by law to transmit their legislative proposals, reports, or testimony to the Congress without prior clearance.[285]

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[281] OMB Circular No. A-19, *supra* at ¶¶ 3, 7.
[282] *Id*. at ¶ 7(f)(1)(g).
[283] 5 U.S.C. § 552b Note (referencing section 2 of Pub. L. No. 94-409); *see also*, 5 U.S.C. § 552 (Public information law).
[284] *See* 31 U.S.C. §§ 1101, 1108(a).
[285] OMB Circular No. A-19, *supra* at ¶ 4.

The OMB is an office in the EOP. The Director is the head of the OMB and is appointed by the President, by and with the advice and consent of the Senate. The Director administers the Office "under the direction of the President."[286] Thus, the President's authority is at its peak over an office such as OMB.[287]

Executive Orders. The President can establish, by executive directive, principles upon which to justify expenditures, and direct agencies to use these principles to justify their budget submissions or legislative proposals. For example, a common principle is to justify budget proposals with a cost benefit analysis, and the analysis can include both quantitative and qualitative measures. E.O. 12893, Principles for Federal Infrastructure Investments (January 26, 1994) exemplifies all of these parameters. The Order establishes four principles of federal infrastructure investment: (a) systematic analysis of expected benefits and costs; (b) efficient management; (c) private sector participation; and (d) encouragement of more effective state and local programs. It directs agencies to use these principles to justify major infrastructure investment and grant programs in their annual budget submissions to OMB. It also requires agencies to employ these principles and supporting analyses when requesting OMB clearance for legislative proposals that would authorize or reauthorize infrastructure programs.

The systematic analysis of expected benefits and costs is defined by the Order as follows (emphasis added):

> Infrastructure investments shall be based on systematic analysis of expected benefits and costs, ***including both quantitative and qualitative measures***, in accordance with the following:
>
> (1) Benefits and costs should be quantified and monetized to the maximum extent practicable. All types of benefits and costs, both market and nonmarket, should be considered. ***To the extent that environmental and other nonmarket benefits and costs can be quantified, they shall be given the same weight as quantifiable market benefits and costs.***
>
> (2) Benefits and costs should be measured and appropriately discounted over the ***full life cycle*** of each project. Such analysis will enable informed tradeoffs among capital outlays, operating and maintenance costs, and ***nonmonetary costs borne by the public***.
>
> * * * * *
>
> (5) ***Analyses should consider not only quantifiable measures of benefits and costs, but also qualitative measures reflecting values that are not readily quantified.***

[286] 31 U.S.C. §§ 501, 502(a).
[287] Boundaries Report, Chapter VI(1), (2) and introductory paragraph.

There are numerous executive orders that direct agencies to submit reports or other information with, or as part of, their budget submissions to OMB. The following are some examples of these executive orders:

E.O. 12780, Federal Agency Recycling and the Council on Federal Recycling and Procurement Policy, October 31, 1991. The Federal Recycling Coordinator shall review and report annually to the OMB, at the time of agency budget submissions, the actions taken by the agencies to comply with the requirements of this order --to promote cost-effective pollution prevention and the conservation of natural resources, by reducing waste and recycling the resources.

E.O. 12873, Federal Acquisition, Recycling, and Waste Prevention, October 20, 1993. The coordinators/executives shall generate an annual report to the OMB, at the time of agency budget submissions, on the actions taken by the agencies to comply with the requirements of this order directing the head of each Executive agency to incorporate waste prevention and recycling in the agency's daily operations and work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products.

E.O. 13123, Greening the Government Through Efficient Energy Management, June 8, 1999. Budget submissions shall include the costs associated with: encouraging the use of, administering, and fulfilling agency responsibilities under Energy-Savings Performance Contracts, utility energy-efficiency service contracts, and other contractual platforms for achieving conservation goals; implementing life-cycle cost-effective measures; procuring life-cycle cost-effective products; and constructing sustainably designed new buildings, among other energy costs.

E.O. 13179, Providing Compensation to America's Nuclear Weapons Workers, December 7, 2000. The Secretaries of Labor, Health and Human Services, and Energy shall, as part of their annual budget submissions, report to the OMB on their activities under the Energy Employees Occupational Illness Compensation Program.

E.O. 13031, Federal Alternative Fueled Vehicle Leadership, December 13, 1996. As part of its budget submission to the OMB, each agency shall submit a report on its compliance with sections 303 and 304 of the 1992 Energy Policy Act.[288] The report shall state whether the agency is in compliance with the Act, and substantiate that statement with quantitative data.

E.O. 13270, Tribal Colleges and Universities, January 3, 2002. The agency's performance indicators and objectives should be clearly reflected in the agency's annual budget submission to the OMB. The Order is referring to indicators of the agency's success in its efforts to increase the capacity of tribal colleges to compete effectively for any available grants, contracts, cooperative agreements, and any other Federal resources.

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[288] The Energy Policy Act of 1992 generally requires that, of the vehicles acquired by each agency for its fleets, subject to certain conditions specified in section 303(b)(1) of the Act, 25 percent should be alternative fueled vehicles (AFVs) in (FY 1995). AFVs in fiscal year (FY) 1996, 33 percent in FY 1997, 50 percent in FY 1998, and 75 percent in FY 1999 and thereafter.

E.O. 13256, President's Board of Advisors on Historically Black Colleges and Universities, February 12, 2002. The department's or agency's annual goal should be clearly reflected in the department's or agency's annual budget submission to the OMB. The Order is referring to the goals for how the department or agency intends to increase the capacity of historically black colleges and universities to compete effectively for grants, contracts, or cooperative agreements.

There are numerous executive orders that explain, clarify, or describe the cost accounting principles that should be applied in submissions to OMB. For example, E.O. 13148, Greening the Government Through Leadership in Environmental Management, December 20, 2001, directs as follows:

> Sec. 302. Application of Life Cycle Assessment Concepts. Each agency with facilities shall establish a pilot program to apply life cycle assessment and environmental cost accounting principles. To the maximum extent feasible and cost-effective, agencies shall apply those principles elsewhere in the agency to meet the goals and requirements of this order. . . . The Environmental Protection Agency (EPA), . . . shall, to the extent feasible, assist agencies in identifying, applying, and developing tools that reflect life cycle assessment and environmental cost accounting principles and provide technical assistance to agencies in developing life cycle assessments and environmental cost accounting assessments under this Part.

See also, E.O. 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition (September 14, 1998).

Conclusion. Pursuant to the Budget Act, the President has broad discretion over the information agencies must provide to the OMB with their budget submissions, accompanying it or included within. Executive orders have been used to require submissions by agencies of a wide variety of information. OMB Circular A-19 requires agencies to submit "information required by statute or by Administration policies,"[289] with their reports or legislative proposals to Congress. Given the broad discretion the President has over the budget process and review of communications to Congress, and based on past practice, the President has a basis for requiring the climate impact statements from agencies with their budget submissions and with legislative proposals and reports to Congress.

Given his position as Chief Executive, and supported by the U.S. policy of transparency in government declared by Congress in the federal open meetings law, the President has the authority to require agencies to provide carbon impact statements in their reports to "the American people."

Good candidate to implement by executive order (3 parts).

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[289] OMB Circular No. A-19, *supra* at ¶ 7(f)(1)(g).

Federal Energy Management Executive Order incorporating the following:

1. **Zero net emission goals for buildings**
2. **Renewable energy goals**
3. **GHG emission reduction goals**
4. **GHG reduction goals for transportation activities**
5. **Enforcement procedures for meeting goals**
6. **Conduct Audits**
7. **Submit sufficient budget requests**
8. **Goals and incentives for suppliers**
9. **Link energy efficiency and emissions goals to financial assistance**

C-2.1-2.9

Background. The President has substantial authority over the management of government operations, and there has been the tradition over many administrations to use executive orders as the primary, or at least as an important policy and management tool. The combination of broad statutory delegations, the President's position as the Chief Executive, and deferential court review in this area give the President significant authority to take the action in this proposal.[290] Chapter 8 of the PCAP Report is a comprehensive plan for managing federal emissions. It includes eleven sections of presidential actions. This analysis showcases some of the key actions from a variety of the sections in that chapter.

General Authority. The President, designated as the Chief Executive, has oversight authority over the management of federal operations in the executive branch. This is further strengthened by two key pieces federal legislation. The Federal Procurement and Administrative Services Act ("the Procurement Act") delegates broad and substantial authority to the President over procurement practices.[291] Procurement includes the purchase of goods and services, as well as the purchase or lease of real property unless otherwise indicated. This is the subject of Chapter IX of the Boundaries Report; the detailed analysis will not be repeated here. Succinctly, the General Services Administration (GSA), located within the EOP, is headed by an Administrator appointed by the President, with the advice of the Senate,[292] and the Administrator "perform[s] his functions subject to the direction and control of the President."[293] Further, section 205(a) of the Procurement Act provides that the President "may prescribe such policies and directives, not inconsistent with the provisions of this Act, as he shall deem necessary to effectuate the provisions of said Act."[294]

[290] See Boundaries Report, Chapter III(A)(2)(b), IX.
[291] Codified at 40 U.S.C. §101 et. seq.
[292] *Id.* at § 302 (a).
[293] *Id.* at § 302(a).
[294] 40 U.S.C. § 121(a).

The President's authority over the federal executive budget is broad. The procedure required is found in the Congressional Budget and Impoundment Control Act of 1974 (the Budget Act).[295] Pursuant to the Budget Act, "The President shall prepare budgets of the United States Government . . . ." 31 U.S.C. §1104(a). See Proposal C-1.

Further, management policies that address climate change, energy efficiency, energy conservation and the like are supported by, further the purposes of, or reaffirm and strengthen national policy and programs established by legislation. For example, an entire subchapter of the Energy and Independence Security Act of 2007 (EISA) is devoted to energy savings in government and public institutions.[296] The EISA is "an act to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes."[297] See also Proposal C-3 for a more comprehensive list of statutes that make pollution prevention, energy conservation and the like a national goal or priority. Further, it appears unavoidable that GHGs will be regulated under the CAA (see Proposal B-7). The measures contemplated here would be consistent with that effort.

Presidents have issued broad sweeping executive orders in regard to management practices that address pollution prevention, environmental sustainability, energy efficiency, energy conservation, and GHG reduction policies and programs. In this regard, the following are some key orders:[298] (1) E.O. 11912 Delegation of Authorities Relating to Energy Policy and Conservation, April 13, 1976; (2) E.O. 12003, Relating to Energy Policy and Conservation, July 20, 1977; (3) E.O. 12759, Federal Energy Management, April 17, 1991; (4) E.O. 12902, Energy Efficiency and Water Conservation at Federal Facilities, March 8, 1994; (5) E.O. 13101, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, September 14, 1998; (6) E.O. 13123, Greening the Government through Efficient Energy Management, June 8, 1999; (7) E.O. 13148, Greening the Government through Leadership in Environmental Management, April 21, 2000; and (8) E.O. 13423, Strengthening Federal Environmental, Energy, and Transportation Management, January 24, 2007. E.O. 13123 and 13423 explicitly address GHG emissions, and E.O. 13123 states, "[t]he Federal Government, as the Nation's largest energy consumer, shall significantly improve its energy management in order to save taxpayer dollars and reduce emissions that contribute to air pollution and global climate change."

In addition there are numerous executive orders issued to address specific aspects of federal management, or a more limited subject matter, for example:[299] (1) E.O. 11602, Providing for Administration of the Clean Air Act with Respect to Federal Contracts, Grants, or Loans, June 29, 1971; (2) E.O. 11738, Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants, or Loans, September 10,

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[295] *See* 31 U.S.C. §§ 1103 et. seq. (formerly the Budget and Accounting Procedures Act of 1950).
[296] 42 U.S.C. Chapter 152, Subchapter 4, § 17001 et. seq.
[297] Pub. L. No. 110-140, 110 Stat. 1659 (Dec. 19, 2007).
[298] Many of these are no longer in effect.
[299] Many of these are no longer in effect.

1973; (3) E.O. 12845, Requiring Agencies to Purchase Energy Efficient Computer Equipment, April 21, 1993; (4) E.O. 12873, Federal Acquisition, Recycling, and Waste Prevention, October 20, 1993; (5) E.O. 13134, Developing and Promoting Biobased Products and Bioenergy, August 12, 1999; (6) E.O. 13149, Greening the Government through Federal Fleet and Transportation Efficiency, April 21, 2000; (7) E.O. 13221, Energy Efficient Standby Power Devices, July 31, 2001; and (8) E.O. 13432, Cooperation Among Agencies in Protecting the Environment with Respect to Greenhouse Gas Emissions from Motor Vehicles, Nonroad Vehicles, and Nonroad Engines, May 14, 2007. E.O. 13432 explicitly addresses GHG emissions, while 13134 and 13149 address GHG emissions as a policy concern.

Generally, there is sufficient legal authority to support a federal energy management executive order addressing climate change and greenhouse gas emissions as contemplated by this proposal. Most if not all of the proposals in this section have been the subject of, or included in, one or more of the above executive orders. E.O. 13130 is an example of a government-wide energy management executive order; E.O 13148 is an example of a government-wide environmental management executive order.

The following analysis is organized into 3 sections: Goals and Targets (proposals 1-4); Oversight (proposals 5-7); Procurement (proposals 8-9). We begin the analysis with the proposition that, generally, the President has the authority to issue an executive order addressing management of federal operations in regard to energy, climate change and greenhouse gas emissions as established above. As for each specific proposal, the following analysis identifies specific executive orders or statutes *that further support* (in addition to the authority previously laid out) the action proposed, or that present a legal barrier.

Goals and Targets (1-4)

Generally, the President has the authority to set goals and targets regarding the management of federal operations under his oversight authority. Specific goals and targets related to these proposals have been included in the following executive orders: E.O. 13149, E.O. 13123, E.O. 12902, E.O. 12759, E.O. 12003, and E.O. 13423. These are reviewed further in the relevant section below. Further, pursuant to 42 U.S.C. § 6361, **"**[t]he President shall, to the extent of his authority under other law, establish or coordinate Federal agency actions to develop mandatory standards with respect to energy conservation and energy efficiency to govern the procurement policies and decisions of the Federal Government and all Federal agencies, and shall take such steps as are necessary to cause such standards to be implemented."

1. Zero net emission goals for buildings

The establishment of this target is explicitly supported by federal legislation. Congress has enacted energy conservation standards for new buildings. One purpose of this law is to "redirect Federal policies and practices to assure that reasonable energy conservation features will be incorporated into new commercial and residential buildings receiving Federal financial

assistance."[300] Beginning in 2006, the Secretary of Interior has been required to establish revised Federal building energy efficiency performance standards that require that "if life-cycle cost-effective for new Federal buildings, the buildings shall be designed to achieve energy consumption levels that are at least 30 percent below the levels established in the 2005 version of the ASHRAE Standard or the International Energy Conservation Code and that sustainable design principles are applied to the siting, design, and construction of all new and replacement buildings.[301]

Further, not later than December 19, 2008, the Secretary shall establish, by rule, revised Federal building energy efficiency performance standards that apply to new Federal buildings and Federal buildings undergoing major renovations. The buildings shall be designed so that the fossil fuel-generated energy consumption of the buildings is reduced by the following percentages as compared with 2003 energy consumption by similar buildings – 55% by 2010; 65% by 2015; 80% by 2020; 90% by 2025; 100% by 2030. [302]

Subsequent to release of the PCAP Report, Congress passed the EISA which created an entire subchapter in the U.S. Code devoted to Energy Savings in Buildings and Industry.[303] The Act includes a Zero Net Commercial Building Initiative.[304] One of the attributes of a "zero-net building" is that it is designed, constructed and operated in a manner that will result in no net emissions of GHGs.[305] The goal of the initiative is to develop and disseminate technologies, practices, and policies for the development and establishment of zero net energy commercial buildings for: **(1)** any commercial building newly constructed in the United States by 2030; **(2)** 50 percent of the commercial building stock of the United States by 2040; and **(3)** all commercial buildings in the United States by 2050.[306] Generally all federal agencies are prohibited from entering into contracts or leases in buildings that have not earned the Energy Star label beginning in December 2010. An Office of High-Performance Green Buildings is established and the Director is authorized to identify incentives to "encourage the expedited use of high-performance green buildings." The law includes provisions for reviews, audits, performance standards, outreach, etc.

Further, a number of executive orders have been issued in the past establishing targets and goals for reducing or conserving the energy used in federal buildings. Some examples of these executive orders include: E.O. 13423 (sustainable buildings); E.O. 13123 (lead the nation in energy efficient building design and establishes targets), E.O. 12902 (new building design to meet objectives of the Order, energy efficiency and water conservation, and establishes targets). E.O. 12759 (establishes targets for reducing overall use of BTUs per gross square foot of Federal buildings); and E.O. 12003 (includes targets for reducing annual energy use for existing Federal buildings).

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[300] 42 U.S.C. § 6831(a)(2).
[301] *Id.* at § 6834(a)(3)(A).
[302] *Id.* at § 6834(a)(3)(D).
[303] Subchapter III of Title 42 Chapter 152.
[304] 42 U.S.C. § 17082 et. seq.
[305] *Id.* at § 17082 (a)(3)(C).
[306] *Id.* at § 17082(c).

This proposal is consistent with and supported by these provisions.[307] Although an executive order is not required to give effect to the newly enacted law, the President should still consider issuing one implementing these provisions of the Act. By issuing such an order the President impresses upon agencies his priorities, gives visibility to the effort, and encourages or mandates action at least as quickly as the statute allows. Further, for any standards that are minimal standards the President can order agencies to pursue more aggressive goals and targets (i.e., if the standards prescribe only the minimal target or goal that an agency must reach). For example, in regard to the building energy efficiency performance standards, "[t]he head of each Federal agency shall adopt procedures necessary to assure that new Federal buildings meet or exceed the Federal building energy standards established under section 6834 of this title."[308]

2. Renewable energy goals

In addition to the general statutory basis that provides authority for setting this target, see general authority for this proposal above, Chapter 2, Proposal C-3 and Proposal A, there is also additional authority established by more specific congressional declarations and statutory provisions. A key policy pronouncement is found in 42 U.C.C. § 17285, "Sense of Congress relating to the use of renewable resources to generate energy:"

> Congress finds that—
>
> (1) the United States has a quantity of renewable energy resources that is sufficient to supply a significant portion of the energy needs of the United States;
>
> (2) the agricultural, forestry, and working land of the United States can help ensure a sustainable domestic energy system;
>
> (3) accelerated development and use of renewable energy technologies provide numerous benefits to the United States, including improved national security, improved balance of payments, healthier rural economies, improved environmental quality, and abundant, reliable, and affordable energy for all citizens of the United States;
>
> (4) the production of transportation fuels from renewable energy would help the United States meet rapidly growing domestic and global energy demands, reduce the dependence of the United States on energy imported from volatile regions of the world that are politically unstable, stabilize the cost and availability of energy, and safeguard the economy and security of the United States;

[307] See also, 42 U.S.C. § 6361 (President shall develop 10-year plan for energy conservation with respect to buildings owned or leased by an agency of the United States).
[308] 42 U.S.C. § 6835 (a).

> **(5)** increased energy production from domestic renewable resources would attract substantial new investments in energy infrastructure, create economic growth, develop new jobs for the citizens of the United States, and increase the income for farm, ranch, and forestry jobs in the rural regions of the United States;
>
> **(6)** increased use of renewable energy is practical and can be cost effective with the implementation of supportive policies and proper incentives to stimulate markets and infrastructure; and
>
> **(7)** public policies aimed at enhancing renewable energy production and accelerating technological improvements will further reduce energy costs over time and increase market demand.[309]

Examples of other relevant provisions that support this order include: the National Energy Policy Plan, 42 U.S.C. § 13382(a)(4) (One of the five primary LCES goals is to increase the percentage of energy derived from renewable resources, see Proposal A); NEPA, 42 U.S.C. § 4331 (establishing national environmental policy); Renewable Energy and Energy Efficiency Technology Competitiveness, 42 U.S.C. § 12001(a) ("The Congress finds that it is in the national security and economic interest of the United States to foster greater efficiency in the use of available energy supplies and greater use of renewable energy technologies."); Renewable Energy Initiatives, 42 U.S.C. § 7371 ("The purpose of this subchapter is to establish incentives for the use of renewable energy resources . . . .").

E.O. 13123, issued by President Clinton on June 8, 1999, established a renewable energy target. The Order was revoked by subsequent executive order, E.O. 13423, issued by George W. Bush in 2007.

3. GHG emission reduction goals

This parallels the U.S. commitment as a party to the UNFCCC and the priority strategies in the DOE's LCES. See Proposal A. It combines the President's substantial role in planning climate change policy, see Chapter II, with his broad authority over the management of agency operation.

E.O. 13123 established the following GHG emission reduction goals: reduce GHG emissions attributed to federal facility energy use 30% by 2005 (relative to 1990), and 25% by 2010. This Order was in effect from 1999 through January 24, 2007 (revoked by E.O. 13423).

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[309] 42 U.S.C. § 17285(a). The Act goes on to establish the following goal of the United States: not later than January 1, 2025, the agricultural, forestry, and working land of the United States should provide from renewable resources not less than 25 percent of the total energy consumed in the United States. *Id*. at § 17285 (b).

4. GHG reduction goals to transportation activities

Transportation activities of the federal government have been the subject matter of a number of executive orders in terms of pollution control, energy conservation and energy efficiency measures, for example, E.O. 13150, Federal Workforce Transportation; E.O. 12191, Federal Facility Ridesharing Program; and E. O. 13031, Federal Alternative Fueled Vehicle Leadership, December 13, 1996. E.O. 13149, Greening the Government through Federal Fleet and Transportation Requirements, includes specific goals and targets in this regard (reduce the fleet's annual petroleum consumption at least 20% by the end of FY 2005, compared to FY 1999 levels; increase average EPA fuel economy rating of passenger cars and light trucks acquired by federal agencies).

Some examples of statutory provisions that support this target include:

Encouraging the Use of Alternative Fuels, 42 U.S.C. § 6374: "Beginning in the fiscal year ending September 30, 1990, the Secretary shall ensure, with the cooperation of other appropriate agencies and consistent with other Federal law, that the maximum number practicable of the vehicles acquired annually for use by the Federal Government shall be alternative fueled vehicles."

Federal fleet conservation requirements, 42 U.S.C. § 6374e (mandatory reduction in petroleum consumption): Not later than July 2008, "the Secretary [of Energy] shall issue regulations for Federal fleets subject to section 6374 of this title to require that, beginning in fiscal year 2010, each Federal agency shall reduce petroleum consumption and increase alternative fuel consumption each year by an amount necessary to . . . meet the following goals . . . not later than October 1, 2015, and for each year thereafter, each Federal agency shall achieve at least a 20 percent reduction in annual petroleum consumption and a 10 percent increase in annual alternative fuel consumption, as calculated from the fiscal year 2005 baseline."

Energy Policy, Minimum Federal fleet requirements, 42 U.S.C. § 13212: "Except as provided in subparagraph (B), no Federal agency shall acquire a light duty motor vehicle or medium duty passenger vehicle that is not a low greenhouse gas emitting vehicle. (There are numerous exceptions in subparagraph (B).)

Oversight (5-7)

5. Enforcement procedures for meeting goals

The President has broad oversight authority across a wide range of government activities through, for example, the Budget Act (see Proposal C-1), the Federal Property and Administrative Procurement Act (see Boundaries Report, Chapter IX and the procurement section below), NEPA (See Proposal C-4.), etc. Pursuant to this authority, enforcement procedures and audits are common elements of executive orders. For example, E.O. 13148 includes the following:

> **Sec. 406.** *Compliance Assurance.*
>
> (a) In consultation with other agencies, the EPA may conduct such reviews and inspections as may be necessary to monitor compliance with sections 501 and 504 of this order. Each agency is encouraged to cooperate fully with the efforts of the EPA to ensure compliance with those sections.
>
> (b) Whenever the Administrator notifies an agency that it is not in compliance with section 501 or 504 of this order, the agency shall provide the EPA a detailed plan for achieving compliance as promptly as practicable.
>
> (c) The Administrator shall report annually to the President and the public on agency compliance with the provisions of sections 501 and 504 of this order.

Other examples of other enforcement/compliance provisions can be found in E.O. 13101 (including periodic review of Inspectors General to assess agencies' implementation of this order); and E.O. 13123. These are largely requirements that agencies not in compliance develop plans that will correct the deficiency and include closer oversight over the non-compliant agency by the President or another agency.

6. Conduct Audits

See part 7 above regarding the President's general authority. Further, for specific elements of the management order this may be strengthened by statutory mandates. For example, the Zero Net Commercial Building Initiative described in part 1 above, provides for audits by the Comptroller General to evaluate agency performance under the program.[310]

Audits and reviews are common provisions in executive orders. The following executive orders include examples of this: E.O. 12902 (provides for energy and water surveys and audits of Federal facilities); E.O. 13148 (requires each agency to establish a regulatory environmental compliance audit program and develop and implement a program to conduct facility environmental compliance audits); and E.O. 13101 (provides for a task force to report to the President on agency compliance).

7. Submit sufficient budget requests

As provided by the Federal Budget Act, the President has extensive authority over the federal budget process and the Office of Management and Budget (OMB), the Director administers the Office "under the direction of the President.[311] See Proposal C-4 for details. Not only are agencies required to submit budget requests to the President in the form prescribed by the

[310] 42 U.S.C. §17093.
[311] 31 U.S.C. §§ 501, 502(a).

President, but the President "may change agency appropriation requests."[312] This proposal can be implemented by executive order. Further, this is not an uncommon provision to be included in an executive order. For example E.O. 13148, orders as follows: "Federal agencies shall place high priority on obtaining funding and resources needed for implementation of the Greening the Government Executive Orders, including funding to address findings and recommendations from environmental management system audits or facility compliance audits conducted under sections 401 and 402 of this order. Federal agencies shall make such requests as required in OMB Circular A-11." See also, E.O. 13234 ("Each agency's budget submission to OMB shall specifically request funding necessary to achieve the goals of this order."); E.O. 13123 (same as E.O. 13234); E.O. 13149 (OMB shall review budget requests for adequacy of meeting goals of executive order and agencies shall ensure that their strategy for meeting goals are included in their budget submission).

Procurement

Chapter IX of the Boundaries Report establishes the basis of executive authority for these proposals. The analysis will not be repeated here. In this regard the President's authority is quite broad. The key to this authority is establishing a nexus between the proposed action and economy and efficiency in government operations. However, the courts accept fairly attenuated connections, thus this is not much of a barrier to these proposals. Generally, based on the analysis in Chapter IX the President has the authority to implement these actions by executive order. Provided here are examples of the use of this authority.

8. Goals and incentives for suppliers

The government should exert its purchasing power upstream by creating goals and incentives for its suppliers to improve their energy and emissions profiles, ... PCAP Report 8:9.

As established in Chapter IX of the Boundaries Report, two relevant areas in which past presidents have exerted control under procurement authority are (1) industry control through quality standards and (2) control over vendors via contractual conditions and obligations. Case law applying the Procurement Act supports the President's use of authority in this manner. As long as there is a nexus between the action proposed and an economical and efficient system for the procurement and supply of property and services the action is acceptable, and the courts accept relatively attenuated connections.[313]

A common incentive is to give priority consideration to certain vendors or products. For example, E.O. 12873 provides that the head of each Executive agency shall work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products; agencies shall comply with executive branch policies for the acquisition and use of environmentally preferable products and services. Similarly E.O. 13103 orders that agencies shall comply with executive branch policies for the acquisition and use of environmentally preferable products and services and implement cost-effective procurement preference programs favoring the purchase of these products and services. "Environmentally

[312] 31 U.S.C. § 1108(b).
[313] See Boundaries Report, Chapter IX(2)(b), (c).

preferable" means products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. This comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal of the product or service. E.O. 13423 requires agency acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and use of paper of at least 30 percent post-consumer fiber content.

9. **Link energy efficiency and emissions goals to financial assistance**

The government should exert its purchasing power . . . downstream by linking energy and emissions goals to financial assistance. PCAP Report 8:9.

As established in Chapter IX of the Boundaries Report, in regard to federal financial assistance, state and local governments can only be affected by the executive order where there is some tie between the specific area of state government in question and the federal government. It is enough that a state project is receiving federal support.[314] Again, the action proposed must be related to the economical and efficient of operation of government, and the courts have accepted fairly attenuated connections (see item 8 above). In addition, the actions prescribed by the order and any subsequent actions resulting from the order must not contradict any other law. Thus, for this proposal if the financial assistance that is the subject matter of the order is established by statute, or is associated with a program that is established by statute, a review should be undertaken for any potential conflict. If the order is of general applicability (e.g., all agencies, all financial assistance, etc.) language that addresses this issue should be included in the order, for example, "this order applies to all financial assistance, provided there is no conflict with other law."

Again it is not uncommon for executive orders to link financial assistance with the implementation of a policy, for example, E.O. 11602 provides as follows:

> Policy. It is the policy of the Federal Government to improve and enhance environmental quality. In furtherance of that policy, the program prescribed in this Order is instituted to assure that each Federal agency empowered to enter into contracts for the procurement of goods, materials, or services and each Federal agency empowered to extend Federal assistance by way of grant, loan, or contract shall undertake such procurement and assistance activities in a manner that will result in effective enforcement of the Clean Air Act.

Conclusion. Pursuant to the President's broad authority over federal government operations, supported by additional congressional declarations and statutory provisions that support many of these proposals and past practice, the President has the authority to issue a federal energy management executive order that includes the above proposals.

Good candidates to implement by executive order (9 proposals).

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[314] See Boundaries Report Chapter IX(2)(a).

Declare that it is the responsibility of the federal government to protect the atmosphere and related natural systems as a global commons and public trust. Declare that protection of the atmosphere is a principal duty of federal program managers and incorporate that responsibility into managers' performance standards and ratings.

C-3

The President should issue a declaration that the atmosphere is a global commons whose benefits and obligations for stewardship extend to all Americans, present and future. . . . While a declaration of the commons would not have the force of law, it would establish and make visible a principle that should govern domestic and international policy in the years ahead – the recognition of our obligation to protect the resources on which all people depend. PCAP Report 2:2-3.

The President should issue these directives . . .

- *The President should establish the policy that all elected and agency officials are trustees of resources owned by the American public. The President should direct agency officials to approach climate security as a national security priority and to use their authorities and resources to protect the ecological trust. PCAP Report, 9:4.*

Generally. There are two parts to this proposal: (1) declaring that the atmosphere is a global commons that should be protected; and (2) declaring that it is the responsibility of federal employers to protect the atmosphere as a global commons (or public trust) and incorporating that responsibility into performance standards and ratings.

In regard to the first part of the proposal, the declaration to the general public is aspirational. As proposed in the PCAP Report it will have no legal effect. By convention, directives that are issued to those outside the government are issued as presidential proclamations; executive orders are directed to officials within the government.[315] In addition, proclamations are better suited for aspirational directives.[316] Presidents frequently combine directive tools to implement policies. For example, for this proposal a presidential proclamation could be used for the first part of the proposal, directed to the public, and an executive order for the second part directed to federal agencies and referencing the proclamation.

In terms of the second part of this proposal, incorporating protection of the atmosphere into the duties of federal program managers and translating that into performance standards and ratings, the President has significant authority over the performance appraisal system for federal employees. It is not uncommon for a president to issue an executive order establishing or declaring a federal policy and directing that agencies incorporate corresponding duties into performance standards (or establishing an award system for successful implementation of the

[315] See Boundaries Report, Chapter II(1), (2).
[316] See, e.g., Section I of this report (proclamation section).

policy). Performance standards must be based on objective criteria; thus, any principle upon which they are based must be clearly defined.

The first part of this analysis identifies supporting authority for the declaration. Although the declaration is aspirational, grounding it in authority lends credibility and legitimacy to the directive. Further, it bears on the second part of this proposal as the declaration will also be used as the basis for an order to federal agencies to establish duties and performance standards of program managers.

3.1. Declaring that the Atmosphere is a Global Commons that should be Protected

Background. There is no statute that establishes this principle explicitly. However, it is not uncommon for executive orders to be issued "in furtherance of" or "to reaffirm and strengthen" a policy, principle or duty, and a policy or duty contained in a statute carries the most weight.[317] Executive orders are also sometimes issued "consistent with" statutory authority.[318] There is a cogent, supportable argument that the policy contemplated by this proposal does not contradict the will of Congress and is, in fact, in furtherance of Congress' will as has been expressed in numerous statutes over time. A review of some of these statutes follows below.

Statutes. The following is a review of selected statutes that support the principle contemplated by this directive. This evaluation is organized into three sections: (1) statutory provisions that establish a purpose, mission, goal, finding or declaration of national policy directly supporting this proposal (e.g., it is traditionally or explicitly inclusive of air pollution or climate change); (2) statutory provisions with the purpose, mission, goal, finding or declaration of national policy that primarily regard something other than the air or the atmosphere; however, protection of the atmosphere would be an inherent part of the strategy necessary to address the mission or goal of the law; and (3) statutory provisions that this declaration is "consistent with." There are numerous statutes that could be included in each of these categories; we highlight here some of the most significant as examples of supportive authority.

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[317] *See, e.g.* Exec. Order No. 11987, Exotic Organisms, (May 24, 1977) (". . . in **furtherance of** the purposes and policies of the Lacey Act . . . and the National Environmental Policy Act of 1969, . . .it is hereby ordered as follows . . . ."); Exec. Order No. 13157, Increasing Opportunities for Women-Owned Small Businesses, (May 23, 2000) (In order to reaffirm and strengthen the statutory policy contained in the Small Business Act, it shall be the policy of the executive branch to take the steps necessary to …").

[318] E.g., Exec. Order No. 12114, Environmental Effects Abroad of Major Federal Actions, (Jan. 4, 1979) ("in order to further environmental objectives consistent with the foreign policy and national security policy of the United States, it is ordered as follows . . . .").

1. Statutory provisions that establish a purpose, mission, goal, finding or declaration of national policy that directly supports the declaration.

This section establishes that it is national policy to protect the air and atmosphere (e.g., CAA, NEPA and other general policy declarations), that from a policy perspective climate change is already recognized as global in nature, and that there is an inter-generational obligation in terms of protecting and preserving the environment.

a. Protecting the Air. The following are some key provisions from four key statutes that establish national policy to protect the air and atmosphere. Some of these provisions are of a general nature but obviously would include air pollution or the protection of the atmosphere.

Air Pollution Prevention and Control, Chapter 85 of Title 42.[319]

The congressional findings and declaration of purpose are quoted in full, as they are directly related to this principle, and applicable to all of subchapter I (programs and activities)[320] which includes the CAA. See Proposal B-7 regarding future regulation of GHGs under the CAA.

> The Congress finds—
>
> (1) that the predominant part of the Nation's population is located in its rapidly expanding metropolitan and other urban areas, which generally cross the boundary lines of local jurisdictions and often extend into two or more States;
>
> (2) that the growth in the amount and complexity of air pollution brought about by urbanization, industrial development, and the increasing use of motor vehicles, has resulted in mounting dangers to the public health and welfare, including injury to agricultural crops and livestock, damage to and the deterioration of property, and hazards to air and ground transportation;
>
> (3) that air pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of States and local governments; and
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> (4) that Federal financial assistance and leadership is essential for the development of cooperative Federal, State, regional, and local programs to prevent and control air pollution.

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[319] 42 U.S.C. §§ 7401- 7671q.

[320] *Id*. at §§ 7401-7515 (this subchapter also includes the following parts: A) Air Quality and Emissions Limitations; B) Ozone Protection; C) Prevention of Significant Deterioration of Air Quality; and D) Plan Requirements for Nonattainment Areas.

(b) Declaration

The purposes of this subchapter are—
(1) to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;

(2) to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution;

(3) to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and

(4) to encourage and assist the development and operation of regional air pollution prevention and control programs.

(c) Pollution prevention

A primary goal of this chapter is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this chapter, for pollution prevention.[321]

National Energy Policy Act (NEPA), Chapter 55 of Title 42.[322]

NEPA is the subject matter of Proposal C-4. Part (b) of the congressional declaration, which is also relevant here, is quoted in full in that proposal.

Congressional declaration of purpose: "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality."[323]

Policy declaration as to pollution prevention generally.[324]

"The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner

[321] 42 U.S.C. § 7401.
[322] *Id*. at §§ 4321-4370f.
[323] *Id.* at. § 4321(a).
[324] *Id.* at. § 13103.

whenever feasible; *and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner."*[325]

The congressional findings are also relevant*: The Congress finds that . . . [t]here are significant opportunities for industry to reduce or prevent pollution at the source* through cost-effective changes. . . . *Such changes* offer industry substantial savings . . . as well as *help protect the environment* and reduce risks to worker health and safety.[326]

Environmental Quality Improvement, Chapter 56 of Title 42.[327]

The Congress declares that there is a national policy for the environment which provides for the enhancement of environmental quality. This policy is evidenced by statutes heretofore enacted relating to the prevention, abatement, and control of environmental pollution, water and land resources, transportation, and economic and regional development. This declaration goes on to incorporate this into the duties of federal agencies, "to assure that each Federal department and agency conducting or supporting public works activities which affect the environment shall implement the policies established under existing law. . . ."[328]

b. Global Policy. The following statutory provisions are representative of the recognition, from a policy perspective, that climate change should be addressed as a global issue: (1) The Global Climate Protection Act, 15 U.S.C. § 2901 Note, see especially § 1101(5) (the global nature of the problem will require vigorous efforts to achieve international cooperation aimed at minimizing and responding to adverse climate change), and § 1103 (coordinating U.S. climate change policy in the international arena); (2) The Global Change Research Act 15 U.S.C. §§ 2921-2961, see especially § 2901(findings), and Subchapter II (§§ 2951-2961) (international cooperation in global change research); and (3) 22 U.S.C. § 7902 (foreign policy goal of reducing GHG intensity in developing countries). Excerpts from these statutes and others that bear on this point are included in Appendix A. Further, the U.S. is a party to the UNFCCC which is premised on the global nature of the atmosphere and thus the global nature of the policy to address climate change.

c. Inter-generational Obligation. The following statutory provisions are representative of the recognition that protecting the atmosphere is an inter-generational obligation: (1) The Global Climate Protection Act, 15 U.S.C. § 2901 Note, see especially § 1101(4) (action must be taken now although consequences of the greenhouse effect may not be fully manifested until the next century); (2) NEPA, 42 U.S.C. §4331(b) "[I]t is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to

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[325] *Id*. at § 13103(b) (emphasis added). (Recognizes that preventing emissions in the first place will help to protect the environment. This is consistent with the treatment of the atmosphere as a global commons, as inherent in this is the prevention of GHG emissions.)

[326] 42 U.S.C. § 13103(a)(2) (emphasis added).

[327] *Id*. at § 4371 et. seq.

[328] *Id.* at § 4371(b)(1); *but see*, 42 U.S.C. § 4371(b)(2) (The primary responsibility for implementing this policy rests with state and local government).

the end that the Nation may . . . fulfill the responsibilities of each generation as trustee of the environment for succeeding generations . . . .” This principle has also been recognized by executive order; for example, E.O. 12780, Federal Agency Recycling and the Council on Federal Recycling and Procurement Policy (October 31, 1991) (“Whereas, this Administration is determined to secure for future generations of Americans their rightful share of our Nation’s natural resources, as well as a clean and healthful environment in which to enjoy them . . . .”). Further, an inter-generational obligation is an accepted principle that applies to other ecosystems and natural resources, such as federal parks, forests and national monuments.[329]

Finally, this is a recognized principle in the UNFCCC:

> The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.[330]

2. Protection of the atmosphere would be an inherent part of the strategy necessary to address the mission or goal of the law.

There are a multitude of statutes with the mission, goal or purpose to protect a particular ecosystem, resource, animal and the like. There are 89 chapters in Title 16 (Conservation) alone each dealing with the protection of an ecosystem, resource, animal and the like (e.g. national parks, national forests, soil, water, watersheds, dolphins, seals, birds, wildlife, fisheries, etc). Using the Endangered Species Act of 1973 (ESA)[331] and The Marine Mammal Protection Act (MMPA)[332] as examples, the following is language that exemplifies the kinds of purposes, missions, and goals that are established by these Acts.

The purposes of the ESA are “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species . . . .”[333] “It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter.”[334] Further, pursuant to the ESA whenever any

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[329] E.g., 16 U.S.C.A. § 410gg (“In order to preserve and protect for the education, inspiration, recreation, and enjoyment of present and future generations a rare combination of terrestrial, marine, and amphibious life . . . there is hereby established the Biscayne National Park . . . .”); 7 U.S.C.A. § 6707 (Urban forestry demonstration projects: “The focus of such a study and implementation project should be to protect the environment and associated natural resource values, for current and future generations.”); 16 U.S.C.A. § 460uu-2 (“The Secretary shall protect, manage, and administer the monument for the purposes of preserving the scenery and the natural, historic, and cultural resources of the monument and providing for the public understanding and enjoyment of the same in such a manner as to perpetuate these qualities for future generations.”).
[330] UNFCCC, *supra* at Art. 3(1).
[331] 16 U.S.C. § 1531 et. seq.
[332] *Id*. at § 1361 et. seq.
[333] *Id*. at § 1531(b).
[334] *Id*. at. § 1531(c)(1).

species is listed as a threatened species, "the Secretary [of Interior] shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species."[335]

Pursuant to the MMPA, "The Congress finds that . . . certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities . . . such species and population stocks should not be permitted to . . . diminish below their optimum sustainable population. Further measures should be immediately taken to replenish any species or population stock which has already diminished below that population. In particular, efforts should be made to protect essential habitats . . . . from the adverse effect of man's actions . . . ."[336] "[I]t is the sense of the Congress that they [marine mammals] should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that the primary objective of their management should be to maintain the health and stability of the marine ecosystem . . . ."[337]

Given the science regarding the impacts of climate change, protecting these ecosystems, natural resources, animals and the like (meeting the missions, goals and purposes of the laws) will require addressing climate change. Therefore, based on current scientific findings a duty to protect the atmosphere is thus implied, or becomes inherent in most, if not all of these laws, in order to protect the ecosystem, natural resource, animal, etc.[338]

Congress already explicitly recognizes the connection between changes in the atmosphere and the management of traditional ecosystems both explicitly in congressional findings and implicitly by supporting or requiring research in this regard, see, e.g., 15 U.S.C. § 2931(a)(2) (Congress finds that the consequences of global warming could adversely affect world agricultural and marine production, coastal habitability, biological diversity, human health, and global economic and social well-being); 16 U.S.C. § 1447d (projects eligible for funding under this act include research with respect to assessment of the effects of climate change on marine resources in the region); and 16 U.S.C. § 1601 (the report by the Secretary of Agriculture shall include an analysis of the potential effects of global climate change on the condition of renewable resources on the forests and rangelands of the United States). Excerpts from these statutes and others that bear on this point are included in Appendix A.

3. Statutory provisions that this declaration is "consistent with."

The principle contemplated by this proposal implies duties that are consistent with and further the purposes of a multitude of laws; for example, laws regarding energy conservation and energy

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[335] *Id*. at § 1553(d).
[336] 16 U.S.C. § 1361(1), (2)
[337] *Id.* at § 1361(6).
[338] Accord, U.S. Climate Change Science Program and the Subcommittee on Global Change Research, *Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources*," 1-1 to 1-6 (June 2008) *(*This report provides a preliminary review of adaptation options for climate-sensitive ecosystems and resources in the U.S. and existing adaptation knowledge to support managers in taking immediate actions to meet their management goals in the context of climate change. Within this context, the report presents a strategy for addressing climate change under current authorities: "with creative re-examination of current authorities their full capabilities could be applied to address climate change impacts").

efficiency, (see Proposal A-2 for some examples); laws intended to reduce emissions by the general public (see Proposal A-4 for some examples); and laws intended to reduce the emissions of the federal government (see Proposal C-2), in addition to general air pollution laws.

The following is a sample of relevant congressional declarations and findings that can be found in these laws:

a. National Energy Policy, Federal Energy Management.[339]

"It is the purpose of this part [Part B. Federal Energy Management] to promote the conservation and the efficient use of energy and water, and the use of renewable energy sources, by the Federal Government."[340]

b. National Energy Conservation Policy, Chapter 91 of Title 42.

"The purposes of this chapter are to provide for the regulation of interstate commerce, to reduce the growth in demand for energy in the United States, and to conserve nonrenewable energy resources produced in this Nation and elsewhere, without inhibiting beneficial economic growth."[341] Further, "all sectors of the economy of the United States should continue to reduce significantly the demand for nonrenewable energy resources such as oil and natural gas by implementing and maintaining effective conservation measures for the efficient use of these and other energy sources."[342]

c. Energy Independence and Security Act of 2007.[343]

"An Act to move the United States toward greater energy independence and security, to increase the production of clean renewable fuels, to protect consumers, to increase the efficiency of products, buildings, and vehicles, to promote research on and deploy greenhouse gas capture and storage options, and to improve the energy performance of the Federal Government, and for other purposes."

d. Development of Energy Sources, Chapter 73 of Title 42.

"The Congress hereby declares that *the general welfare and the common defense and security require effective action to develop, and increase the efficiency and reliability of use of, all energy sources to meet the needs of present and future generations*, to increase the productivity of the national economy and strengthen its position in regard to international trade, to make the Nation self-sufficient in energy, *to advance the goals of restoring, protecting, and enhancing environmental quality, and to assure public health and safety."*[344]

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[339] 42 U.S.C. §§ 8251-8262k.
[340] *Id.* at § 8251.
[341] *Id.* at § 8201(b).
[342] *Id.* at § 8201(a)(4).
[343] Pub. L. No. 110-140, 121 Stat. 1498 (Dec. 19, 2007).
[344] 42 U.S.C. § 5801(a) (emphasis added).

Determination of priorities which are warranted should be based on such considerations as power-related values of an energy source, *preservation of material resources, reduction of pollutants*, and export market potential (including reduction of imports), among others. On such a basis, *energy sources warranting priority might include, but not be limited to, the various methods of utilizing solar energy.*[345]

Executive Orders. Executive orders are commonly used to establish or declare national policy and direct agencies to act in some manner consistent with the policy. The following are two relevant examples.

E.O. 11514, Protection and Enhancement of Environmental Quality, (March 5, 1970):

> Policy. The Federal Government shall provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. Federal agencies shall initiate measures needed to direct their policies, plans and programs so as to meet national environmental goals. The Council on Environmental Quality, through the Chairman, shall advise and assist the President in leading this national effort.

The Order goes on to establish responsibilities of Federal agencies such as monitoring, evaluating, and controlling their agencies' activities; developing procedures; reviewing their agencies' statutory authority, administrative regulations, and policies, etc. The Order is issued in furtherance of the purpose and policy of the National Environmental Policy Act and is essentially implementing the Act.

E.O. 13089, Coral Reef Protection, (June 11, 1998):

> Policy. All Federal agencies whose actions may affect U.S. coral reef ecosystems shall: (a) identify their actions that may affect U.S. coral reef ecosystems; (b) utilize their programs and authorities to protect and enhance the conditions of such ecosystems; and (c) to the extent permitted by law, ensure that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems.

The Order goes on to establish agency responsibilities and a task force. Agency responsibilities include implementation of measures needed to research, monitor, manage, and restore affected ecosystems, including, but not limited to, measures reducing impacts from pollution, sedimentation, and fishing. The Order is issued under the following authority: the Clean Water Act of 1977; Coastal Zone Management Act; Manguson-Stevens Fishery Conservation and Management Act; NEPA; Marine Sanctuaries Act; National Park Service Organic Act; National Wildlife Refuge System Administration Act; and "other pertinent statutes."

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[345] *Id*. at § 5801(e) (emphasis added).

While the majority of executive orders declaring national policy are grounded in statutory authority, and most of those implement statutory provisions, this is not always the case. The following are two key examples of this.

E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, (February 11, 1994):

> Agency Responsibilities. To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States . . . .

The Order goes on to establish additional agency responsibilities which include developing agency strategies; reporting to the President; conducting its programs, policies, and activities that substantially affect human health or the environment pursuant to guidelines; collecting and analyzing data; and performing internal reviews. The Order does cite any statutes for authority.

E.O. 11990, Protection of Wetlands, (May 24, 1977):

> [I]n order to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative . . . .

The Order goes on to establish other agency duties which include: provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities; avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency makes certain findings; and undertake various reporting and review requirements. The Order is issued only under the general authority of NEPA.

Conclusion. See conclusion section at end of proposal.

3.2 Declaring that it is the responsibility of federal employers to protect the atmosphere as a global commons (or public trust) and incorporating that responsibility into performance standards and ratings.

Background. See subsection A above for the authority to declare the policy contemplated by this proposal. The following addresses the President's authority to establish performance standards.

Statutes. The performance appraisal system for federal employees is described in 5 U.S.C. §§ 4301-4305. All executive agencies are subject to the performance appraisal system described in these provisions.[346] Each agency shall develop one or more performance appraisal systems. They are developed under regulations that Office of Personnel Management (OPM) prescribes. The systems include establishing performance standards on the basis of objective criteria and recognizing and rewarding employees whose performance so warrants.[347] The OPM establishes the performance standards which are based on objective criteria; provides technical assistance to agencies in the development of performance appraisal systems; and reviews each performance appraisal system to determine whether it meets the requirements of this subchapter.[348]

Authority over the Agencies. The OPM is headed by a Director who is appointed by the President, by and with the advice and consent of the Senate. The term of office of any individual appointed as Director shall be 4 years.[349] The functions of the OPM Director indicate that the President has substantial authority over the appraisal system. The functions of the OPM Director include "executing, administering, and enforcing the civil service rules and regulations of the President and the Office and the laws governing the civil service" and "aiding the President, as the President may request, in preparing such civil service rules as the President prescribes, and otherwise advising the President on actions which may be taken to promote an efficient civil service and a systematic application of the merit system principles, including recommending policies relating to the selection, promotion, transfer, performance, pay, conditions of service, tenure, and separation of employees."[350] The President's authority is at its peak in regard to an entity such as the OPM.[351]

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[346] 5 U.S.C. § 4301(1) (This does not include a Government corporation, the Central Intelligence Agency, the Defense Intelligence Agency, the National Geospatial-Intelligence Agency, the National Security Agency, or any Executive agency or unit thereof which is designated by the President and the principal function of which is the conduct of foreign intelligence or counterintelligence activities or the Government Accountability Office).
[347] *Id*. at § 4302(a)**;** *see also* 5 U.S.C. § 4305. (The OPM may prescribe regulations to carry out the purpose of this subchapter.)
[348] 5 U.S.C. § 4304.
[349] *Id*. at. § 1101.
[350] *Id*. at. § 1103(a)(5), (7).
[351] See Boundaries Report, Chapter VI.

All executive agencies are subject to the performance appraisal system as described in the statute section above.

Executive Orders.

There are numerous examples of executive orders that establish performance standards or award programs for federal employees. In these orders, the agency responsibilities and duties are fairly detailed. For example, E.O. 13148, Greening the Government through Leadership in Environmental Management (April 21, 2000) orders as follows:

> The head of each Federal agency is responsible for ensuring that all necessary actions are taken to integrate environmental accountability into agency day-to-day decision making and long-term planning processes, across all agency missions, activities, and functions. Consequently, environmental management considerations must be a fundamental and integral component of Federal Government policies, operations, planning, and management. The head of each Federal agency is responsible for meeting the goals and requirements of this order.

The President cites the following authority for the Order: the Emergency Planning and Community Right-to-Know Act of 1986; the Pollution Prevention Act of 1990; and the Clean Air Act. This ten-page order establishes goals and also includes planning and accountability provisions, management and leadership provisions, agency responsibilities under the three acts cited for authority, landscaping management practices, acquisition and procurement practices, exemptions and general provisions. It is a comprehensive Order. In addition to establishing the actions agencies must take to meet the purpose of the Order, it establishes program performance measurements, and requires "each agency to include successful implementation of pollution prevention, community awareness, and environmental management into its position descriptions and performance evaluations for those positions . . . ." The Order includes provisions for management leadership and performance evaluations; it establishes an environmental leadership and agency awards program; and it provides for compliance assistance and training for managers. Further, each agency is encouraged to incorporate its environmental leadership goals into its Strategic and Annual Performance Plans.

Similarly, E.O. 13149, Greening the Government through Federal Fleet and Transportation Efficiency, (April 21, 2000); E.O. 13902, Energy Efficiency and Water Conservation at Federal Facilities, (Mar. 8, 1994); E.O. 13101, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition, (September 14, 1998) (agency awards program only) are comprehensive orders establishing agency policy, actions agencies must take to comply with the orders, and management and leadership responsibilities. They include a requirement to include the policy objective in performance evaluations and establish award programs for federal managers. These are just a few examples relevant to this proposal.

In these executive orders, objectives are clearly defined, as are criteria for performance evaluations. For example, E.O. 13123, Greening the Government through Efficient Energy

Management, (June 3, 1999) includes the following provision in regard to performance evaluations:

> Agencies shall include successful implementation of provisions of this order in areas such as Energy-Savings Performance Contracts, sustainable design, energy efficient procurement, energy efficiency, water conservation, and renewable energy projects in the position descriptions and performance evaluations of agency heads, members of the agency energy team, principal program managers, heads of field offices, facility managers, energy managers, and other appropriate employees.

Conclusion.

The President has the authority to issue an aspirational proclamation in regard to treating the atmosphere as a global common. There is sufficient authority to give it credibility. In terms of using this proclamation as the basis for a policy that extends to federal management responsibilities, there is substantial authority to proclaim it as a policy that agencies should recognize. In terms of directing agencies to coordinate their activities around this policy, the key will be how this principle is translated into duties and responsibilities (e.g., strategies that reduce GHG emissions). Thus, this conclusion comes with as significant caveat, that the duties and responsibilities will be developed in a manner that is consistent with and does not conflict with other federal policy or law.

The OPM Director has substantial authority over agency performance evaluation systems. The Director, in turn, executes, administers, and enforces the civil service rules and regulations of the President. Thus, the President, generally, has the authority to implement the second part of this proposal by executive order. This is further supported by the historical use of executive orders to implement performance standards and reward systems for federal managers. This is subject to the caveat that objective criteria can be established for the performance standards. That is, the principle of "protecting the atmosphere as a global commons (or public trust)" must be translated into understandable duties and responsibilities and corresponding standards.

By convention, an aspirational declaration directed to the public is typically executed by presidential proclamation, while orders to agencies are by executive order. The President should consider issuing this proposal with two directives: a presidential proclamation declaring the atmosphere a global common; and an executive order directing agencies to include this principle in their management activities and performance appraisals. The executive order would reference the proclamation.

3.1 Aspirational Declaration: Good candidate to implement with executive directive. Alternative form suggested.

3.2 Incorporating the principle into federal management responsibilities: Questionable candidate (or good candidate with a significant caveat) to implement by executive order.

The President should require that all federal agencies include an analysis of the effects of federal actions on global warming as part of any NEPA assessment process. The President should direct the CEQ to provide guidance in the selection and development of protocols and procedures to guide comprehensive, quantitative assessments of GHG emissions for every action subject to NEPA.

C-4

The President shall issue an executive order directing as follows:

> *The Chairman of the CEQ shall issue a Guidance Memorandum that clarifies that global warming must be addressed in NEPA compliance documents and issue instructions to agencies on how, when, and where to include global warming assessments in NEPA processes. Additionally, the Chairman shall support formal rulemaking processes through which guidance shall be incorporated into agency policy.*

The Report goes on to provide details for the Guidance Memorandum and requires a report to be prepared by the Chairman of the CEQ and the Administrator of the EPA and submitted to the President annually.[352]

Background. This proposal is not in the PCAP Report; however, PCAP asked us to evaluate this proposal developed by the Center for American Progress.[353]

Statutes. The National Environmental Protection Act (NEPA)[354] is designed to provide full disclosure of the environmental effects of federal actions to the government and public. The intent of the law is to provide decision-makers with the information necessary to understand the environmental impacts associated with their decisions. NEPA establishes the CEQ and the requirement that federal agencies prepare an environmental impact statement (EIS) for certain proposed actions. See Proposal E-2 for more information about the CEQ and the Office of Environmental Quality which supports the CEQ.

National Policy. The Congress declares, as national environmental policy, "that it is the continuing policy of the Federal Government, . . . to use all practicable means and measures, . . . in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social,

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[352] Christopher Pyke and Kit Batten, *Full Disclosure: An Executive Order to Require Consideration of Global Warming Under the National Environmental Policy Act* (Center for American Progress May 2008).
[353] *Id*. at 14.
[354] Codified at 42 U.S.C. § 4331 et. seq.

economic, and other requirements of present and future generations of Americans."[355] Further, Congress declares as follows:

> (b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—
>
> (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
>
> (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
>
> (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
>
> (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
>
> (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
>
> (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.
>
> (c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.[356]

Role of the CEQ. Pursuant to NEPA, it is the duty and function of the CEQ "to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in subchapter I of this chapter [42 U.S.C. §§ 4331-4335] for the purpose of determining the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto . . . ."[357]

Agency Responsibility. Pursuant to NEPA, to the fullest extent possible, the policies, regulations, and public laws of the United States shall be interpreted and administered in

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[355] 42 U.S.C. § 4331(a) (part (a) is quoted in full in Proposal C-3).
[356] 42 U.S.C. § 4331(b).
[357] *Id.* at § 4344(3).

accordance with the policies set forth in this chapter (see policies above), and all agencies of the Federal Government shall:

> (A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision making which may have an impact on man's environment;
>
> (B) ***identify and develop methods and procedures, in consultation with the Council on Environmental Quality*** established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision making along with economic and technical considerations . . . .[358]

Further, agencies are required to include "in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment," a detailed statement on:

> (i) the environmental impact of the proposed action,
>
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
>
> (iii) alternatives to the proposed action,
>
> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
>
> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[359]

This statement is commonly referred to as an environmental impact statement (EIS). Copies of the EIS are made available to the President, the CEQ and to the public as provided by the public records law, and the EIS accompanies the proposal through the existing agency review processes. The CEQ is explicitly authorized by executive order to issue: regulations to implement this section; guidelines to federal agencies for the preparation of the EIS; and such other instructions to agencies, and request such reports and other information from them, as may be required to carry out the Council's responsibilities under the Act.[360]

To the fullest extent possible, the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in NEPA and an EIS shall be prepared for "major Federal actions significantly affecting the quality of the human

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[358] 42 U.S.C. § 4332(2)(A), (B) (emphasis added).
[359] *Id*. at § 4332(2)(C).
[360] Exec. Order No. 11514, Protection and Enhancement of Environmental Quality, (Mar. 5, 1970), amended by Exec. Order No. 11991, Relating to Protection and Enhancement of Environmental Quality, (May 24, 1997).

environment." Based on the policies declared in NEPA and this language, the impacts of global warming would fall within the assessment requirements of the Act, including the preparation of an EIS for actions that are "major Federal actions."

Authority over the Agencies. NEPA applies to all departments (except the EPA).[361] As established above, the CEQ reviews and appraises the various programs and activities of the federal government, and establishes guidelines and issues regulations to federal agencies for the preparation of the EIS and other agency responsibilities under the Act. The CEQ's role, however, is to advise and assist the President.

The CEQ is located in the EOP, and the three members are appointed by the President and "serve at the pleasure of President" (by and with the advice and consent of the Senate). Further, the President appoints the Chair from its members, and the duties of the Council are explicitly tied to "assisting" the President.[362] Thus, the authority of the President is at its peak over an entity such as the CEQ.[363] See Proposal E-2 for details. As set forth in E.O. 11472, "The Council shall advise and assist the President with respect to environmental quality matters and shall perform such other related duties as the President may from time to time prescribe. In addition, the President presides over meetings of the Council.

Executive Orders. E.O. 11514, Protection and Enhancement of Environmental Quality (March 5, 1970)[364] implements NEPA. Global warming would fall within the environmental issues to which the executive order applies.

A review of executive orders that cite NEPA as a source of authority reveals that the Act is frequently used as authority to implement policies intended to protect the environment, typically in conjunction with other environmental laws, e.g. E.O. 11643, Feb. 8, 1972 (restricting use of toxic chemicals on federal lands); E.O. 11987, May 4, 1977 (restricting the introduction of exotic species into natural ecosystems); E.O. 13089, June 11, 1998 (coral reef protection).[365] However, executive orders have been used to clarify specific concerns that would fall within the NEPA review process. E.O. 13186 explicitly places impacts on migratory birds within the NEPA review process: "[each agency shall] ensure that environmental analyses of Federal actions required by NEPA or other established environmental review processes evaluate the effects of actions and agency plans on migratory birds**,** with emphasis on species of concern."[366] E.O.

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[361] 42 U.S.C. § 4332(2) ("all agencies shall").
[362] *Id.* at §§ 4342, 4344. *See also*, 42 U.S.C. § 4372(d) (The Director of the Office who is also the Chairman of the CEQ "shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality").
[363] See Boundaries Report, Chapter VI, Intro., 1(b), 1(c).
[364] As amended by Exec. Order No. 11991 (May 24, 1997).
[365] *See also*, Exec. Order Nos.: 11870, Environmental Safeguards on Activities for Animal Damage Control on Federal Lands, (July 18, 1975); 11990, Protection of Wetlands, (May 24, 1977); 12962, Recreational Fisheries, (June 7, 1995); 12996, Management and General Public Use of the National Wildlife Refuge System, (Mar. 25, 1996); 13112, Invasive Species, (Feb. 3, 1999); and 13158, Marine Protected Areas, (May 26, 2000).
[366] Exec. Order No. 13186, Responsibilities of Federal Agencies To Protect Migratory Birds, (Jan. 10, 2001).

11988 explicitly places actions that occur on floodplains within the NEPA review process: "[b]efore taking an action, each agency shall determine whether the proposed action will occur in a floodplain--for major Federal actions significantly affecting the quality of the human environment, the evaluation required below will be included in any statement prepared under Section 102(2)(C) of the National Environmental Policy Act."[367]

Conclusion. Based on the policies declared in NEPA and the provisions regarding agency responsibility, the impacts of global warming would fall within the assessment requirements of the Act, including the preparation of an EIS for actions that are "major Federal actions." The CEQ has the authority to issue a clarification as contemplated by this proposal. Executive orders have been issued to clarify specific concerns that would fall within the NEPA review process. The President has broad authority over the CEQ (the CEQ's role is to advise and assist the President), thus the President has the authority to issue an executive order directing the CEQ to issue such a clarification.

Good candidate to implement by executive order.

[367] Exec. Order No. 11988, Floodplain Management, (May 24, 1977).

D. Protect American Taxpayers from Liabilities

Direct the federal Climate Change Science Program and/or the National Science Foundation to project future taxpayer exposure under the Federal Crop Insurance Program based on projected impacts of climate change on U.S. agriculture. D-1

Anticipate and manage the budget impacts of climate change on the Federal Crop Insurance Program . . . The President should direct USDA to: Estimate future exposure levels for the FCIP based on assessments of the Climate Change Science Program, the Intergovernmental Panel on Climate Change and other highly regarded assessments of climate impacts. Analyze implications for the federal budget, insurance rates and the continued availability of insurance. Assess and prioritize climate adaptation measures based on their potential to reduce insured crop losses. PCAP Report 5:8.

Background. The Department of Agriculture ("USDA") administers the Federal Crop Insurance Program ("FCIP").[368] The purpose of the program is to "improve the economic stability of agriculture through a sound system of crop insurance and provide the means for the research and experience helpful in devising and establishing such insurance."[369]

The Interagency Climate Change Science Program ("CCSP") is an executive branch committee that serves the dual function of integrating research pursuant to the United States Global Research Act of 1990 ("Act")[370] and research conducted under President Bush's Climate Change Research Initiative ("CCRI").[371]

The National Science Foundation ("NSF") is an independent agency that provides funding and grants for all fields of science and engineering with the exception of medical research.[372]

Statutes. The USDA administers the FCIP pursuant to the Crop Insurance Act,[373] which creates within the USDA the Federal Crop Insurance Corporation.[374] The purpose of the program is to

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[368] *See* "Crop Insurance Act" (7 U.S.C. § 1501 et seq.).
[369] 7 U.S.C. § 1502.
[370] *See* 15 U.S.C. § 2933 et seq. (§ 2921 of the Act creates the "Committee on Earth and Environmental Sciences" as an executive branch committee tasked with implementing research under the Act. The transfer of these functions to the CCSP was implicitly recognized by the General Accounting Office in a 2005 report. *See* GAO-05-338R "Climate Change Assessment," page 2 ("CCSP is now responsible for producing and submitting the climate change assessment"). The court in *Center for Biological Diversity v. Brennan* also recognized this aspect of the CCSP's functions. *See* Slip Copy 2007 WL 2408901 (N.D. Cal. 2007).
[371] According to a CCSP fact sheet, the CCSP resulted from cabinet reorganization in 2002 intended to "improve the government wide management of climate science and climate-related technology development." *See* Fact Sheet CCSP-1 *available at* http://www.climatescience.gov/infosheets/factsheet1/CCSP-1-Overview14jan2006.pdf.
[372] *See* NSF website (www.nsf.gov/about/), last visited June 25, 2008. *See also* 42 U.S.C. § 1861 et seq.
[373] 7 U.S.C. § 1501 et seq.
[374] *Id.* at. § 1503.

"improve[e] the economic stability of agriculture through a sound system of crop insurance and provid[e] the means for the research and experience helpful in devising and establishing such insurance."[375] Although the USDA is authorized by statute to sponsor research toward "devising and establishing" crop insurance, authority for the USDA to conduct ongoing research is not explicitly authorized, meaning that although the USDA administers the program, it may not be the ideal agency to conduct or sponsor research on it.

The United States Global Research Act of 1990[376] creates the statutory functions of the CCSP (see footnote 3). Research under the Act is to be conducted in accordance with the U.S. Global Change Research Plan ("Plan") which should lay out the goals and priorities of the U.S. Global Change Program ("Program") for a 10-year period beginning the year the Plan is issued.[377] The Plan represents the implementation of the Act's interagency research.[378] The development and implementation of the Program and the Plan is explicitly delegated to the President by section 2933 of the Act, but the President is directed to act through the Federal Coordinating Council on Science, Engineering, and Technology ("Council") which is in turn directed to develop and implement the Plan through the Committee on Earth and Environmental Sciences ("Committee").[379] This management structure effectively makes the Committee the agency most directly responsible for implementing research under the Act, because although the Chairman of the Council is responsible for developing the Plan, the Chairman is explicitly directed to act through the Committee.[380] The CCSP has subsumed the statutory functions of the Committee (see footnote 3).

The NSF is created and authorized by Chapter 16 of Title 42[381] expressly as an independent agency.[382] The NSF does not directly carry out scientific research.[383] Its purpose is to provide grants and funding for research.[384] The NSF consists of the National Science Board ("NSB") and the Director of the NSF, who is a member of the NSB.[385] Appointment of the Director is made by the President "with the advice and consent of the Senate" with the stipulation that the President, before making an appointment, is required to give the NSB an opportunity to make recommendations on the appointment.[386] The term of the Director is six years "unless sooner removed by the President."[387] Members of the National Science Board also serve terms of six years and, with the exception of the Director, may not serve more than two consecutive terms.[388] Personnel holding positions within executive branch agencies are authorized to serve on NSF

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[375] 7 U.S.C. § 1502.
[376] 15 U.S.C. § 2933 et seq.
[377] *Id.* at §§ 2933–2934.
[378] *See Id.* at § 2934.
[379] *See Id.* at § 2921; §§ 2932–2934.
[380] *See Id.* at § 2934(a).
[381] 42 U.S.C. § 1861 et seq.
[382] *Id.* at § 1861: "There is established in the executive branch of the Government an independent agency to be known as the National Science Foundation . . . ."
[383] *See Id.* at § 1862.
[384] *Id.* at § 1862(1).
[385] *Id.* at § 1861: "The Foundation shall consist of a National Science Board . . . and a Director."
[386] *See Id.* at. §§ 1863-65.
[387] *Id.* at § 1864(a).
[388] *Id.* at. § 1863(d).

special committees but are expressly prohibited from being compensated for this service.[389] The President may direct the NSF to sponsor research: "When so directed by the President, the Foundation is . . . authorized to support, through other appropriate organizations, applied scientific research and engineering research relevant to national problems involving the public interest." [390]

Authority over the Agency. The CCSP is an executive branch agency, but aspects of the CCSP's functions involve implementing research under the United States Global Research Act of 1990. (See footnotes 3 and 4.). Authority over the CCSP flows down from the President through the Committee on Climate Change Science and Technology Integration ("CCCSTI"), which, according to a CCSP publication, is a cabinet-level management committee: "The management structure places accountability and leadership for the science and technology programs in the relevant cabinet departments. The relevant research continues to be coordinated through the National Science and Technology Council in accordance with the Global Change Research Act of 1990."[391] The membership of the CCCSTI includes cabinet-level officials, the Administrators of the EPA and of NASA, and the Director of the NSF, among others.[392] This management structure is generally consistent with the dual function of the CCSP as (1) the statutory committee tasked by the USGCRA with implementing and integrating research pursuant to the Act and (2) the implementing entity for President George W. Bush's CCRI. The CCSP is directly organized under the Interagency Working Group on Climate Change Science and Technology ("Interagency Working Group"), which appears to be responsible for integrating research between the CCSP and the related Climate Change Technology Program. According to the CCSP publication, the Interagency Working Group is responsible for "setting top-level goals for the program and determining what products will be developed and produced to meet those goals. Through this structure, the CCSP also coordinates with the Climate Change Technology Program (CCTP) to address issues at the intersection of science and technology."[393] The CCSP, inasmuch as it is the implementing agency for the CCRI, is completely under presidential control. The President's control over the statutory functions of the CCSP is more limited, although the USGCRA grants considerable discretionary authority to the President, as noted above.

The NSF, as noted above, is an independent agency, although its officials are appointed by the President subject to Senate confirmation. The President explicitly has authority to direct the NSF to support research in the public interest.

Executive Orders. There appear to be no Executive Orders relating directly to either the CCSP or the CCRI. Sixty-six executive orders mention the National Science Foundation. One of these

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[389] *Id.* at § 1873(d).
[390] 42 U.S.C. § 1862(c).
[391] U.S. Climate Change Science Program, "Overview of the U.S. Climate Change Science Program," CCSP-1, 2 (January, 2006).
[392] Composition of CCCSTI: Secretary of Commerce (chair), Secretary of Energy (vice-chair), Director of the Office of Science and Technology Policy (CCCSTI director), EPA Administrator, OMB Director, Director of the National Economic Council, NASA Administrator, Secretary of the Interior, Secretary of the Department of Health and Human Services, Secretary of Transportation, Secretary of Defense, Secretary of State, Secretary of Agriculture, Chairman of the Council on Environmental Quality, NSF Director. *See id.*
[393] *Id.*

orders, dating from 1954, "Administration of Scientific Research by Agencies of the Federal Government," directs that the NSF "in concert with each Federal agency concerned, shall review the scientific research programs and activities of the Federal Government in order, among other purposes, to formulate methods for strengthening the administration of such programs and activities by the responsible agencies, and to study areas of basic research where gaps or undesirable overlapping of support may exist, and shall recommend to the heads of agencies concerning the support given to basic research."[394] This action, premised on protecting the "security and welfare of the United States," is consistent with the authority currently given to the President by section 1862 to direct studies in the public interest, although it should be noted that the Order is so dated that it can serve only as an example of the type of action authorized, as there appears to have been no contemporaneous equivalent to the current section 1862. The NSF is frequently directed to coordinate with other agencies, for example to develop a national system of Marine Protected Areas[395] and to participate in the Interagency Council on Biobased Products and Bioenergy.[396] These executive orders seem to be generally consistent with the President's authority to direct NSF to support research efforts in the public interest.

Conclusion. The PCAP recommendation is within the President's authority, because the CCSP is an executive agency created by the President and clearly under presidential authority. Alternatively, the President may order CCSP to conduct the projection of liability pursuant to the USGCRA, because implementation of USGCRA research is explicitly delegated by Congress to the President and because the objectives of the USGCRA include producing research on mitigating and adapting to climate change.[397] The President also has clear and explicit statutory authority to direct the National Science Foundation to support studies in the public interest,[398] making the NSF a good choice for sponsoring the liability projection.

Good candidate to implement by executive order.

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[394] Exec. Order No. 10,521, § 3, 19 FR 1499 (May 17, 1954).
[395] Exec. Order No. 13,158, 65 FR 34909 (May 26, 2000). Marine Protected Areas.
[396] Exec. Order No. 13,134, 64 FR 44639 (August 12, 1999). Developing and Promoting Biobased Products and Bioenergy.
[397] *See* 15 U.S.C. § 2933 ("The President shall establish an interagency United States Global Change Research Program to improve understanding of global change. The Program shall be implemented by the Plan developed under section 2934 of this title"), § 2934(d) ("The Plan shall provide recommendations for collaboration within the Federal Government and among nations to . . . combine and interpret data from various sources to produce information readily usable by policymakers attempting to formulate effective strategies for preventing, mitigating, and adapting to the effects of global change").
[398] 42 U.S.C. § 1862(c).

Direct the federal Climate Change Science Program and/or the National Science Foundation to project future taxpayer exposure under the National Flood Insurance Program, based on projected impacts of climate change on the frequency and intensity of coastal and riverine flooding. Mitigate budget impacts on flood insurance program. D-2

Anticipate and mitigate the federal budget impacts of climate change on the National Flood Insurance Program (NFIP). The federal government operates the National Flood Insurance Program . . . Growing federal expenditures to compensate property owners for flood losses (more than $150 billion in taxpayer-funded disaster costs after Katrina) could affect the government's ability to fund other vital activities . . . PCAP Report 11:7

Background. The Administrator of the Federal Emergency Management Agency ("FEMA") is authorized by the National Flood Insurance Act of 1968 to administer the National Flood Insurance Program.[399] The Interagency Climate Change Science Program ("CCSP") is an executive branch committee that serves the dual function of integrating research pursuant to the United States Global Research Act of 1990 ("Act")[400] and research conducted under President Bush's Climate Change Research Initiative ("CCRI").[401] The National Science Foundation ("NSF") is an independent agency that provides funding and grants for all fields of science and engineering with the exception of medical research.[402]

Statutes. The National Flood Insurance Act of 1969, as amended, authorizes the administrator of FEMA to "establish and carry out" the NFIP.[403] The NFIP is intended to create a "reasonable method of sharing risk of flood losses."[404] The Act requires the Administrator of FEMA to create a flood insurance advisory committee to advise the Administrator "in the preparation of any regulations prescribed in accordance with this chapter and with respect to policy matters arising in the administration of this chapter . . . ."[405]

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[399] 42 U.S.C. § 4001 et seq. "National Flood Insurance Act of 1968."
[400] *See* 15 U.S.C. § 2933 et seq. (§ 2921 of the Act creates the "Committee on Earth and Environmental Sciences" as an executive branch committee tasked with implementing research under the Act. The transfer of these functions to the CCSP was implicitly recognized by the General Accounting Office in a 2005 report. *See* GAO-05-338R "Climate Change Assessment," page 2 ("CCSP is now responsible for producing and submitting the climate change assessment"). The court in *Center for Biological Diversity v. Brennan* also recognized this aspect of the CCSP's functions. *See* Slip Copy 2007 WL 2408901 (N.D. Cal. 2007).
[401] According to a CCSP fact sheet, the CCSP resulted from cabinet reorganization in 2002 intended to "improve the government wide management of climate science and climate-related technology development." *See* Fact Sheet CCSP-1 *available at* http://www.climatescience.gov/infosheets/factsheet1/CCSP-1-Overview14jan2006.pdf.
[402] *See* NSF website (www.nsf.gov/about/), last visited June 25, 2008. *See also* 42 U.S.C. § 1861 et seq.
[403] 42 U.S.C. § 4001.
[404] *Id.*
[405] *Id.* at § 4025(a)

The United States Global Research Act of 1990[406] creates the statutory functions of the CCSP (see footnote 3). Research under the Act is to be conducted in accordance with the U.S. Global Change Research Plan ("Plan") which should lay out the goals and priorities of the U.S. Global Change Program ("Program") for a 10-year period beginning the year the Plan is issued.[407] The Plan represents the implementation of the Act's interagency research.[408] The development and implementation of the Program and the Plan is explicitly delegated to the President by section 2933 of the Act, but the President is directed to act through the Federal Coordinating Council on Science, Engineering, and Technology ("Council") which is in turn directed to develop and implement the Plan through the Committee on Earth and Environmental Sciences ("Committee").[409] This management structure effectively makes the Committee the agency most directly responsible for implementing research under the Act, because although the Chairman of the Council is responsible for developing the Plan, the Chairman is explicitly directed to act through the Committee.[410] The CCSP has subsumed the statutory functions of the Committee (see footnote 3).

The NSF is created and authorized by Chapter 16 of Title 42[411] expressly as an independent agency.[412] See Proposal D-1 for details. The President may direct the NSF to sponsor research: "When so directed by the President, the Foundation is . . . authorized to support, through other appropriate organizations, applied scientific research and engineering research relevant to national problems involving the public interest."[413]

Authority over the Agency. In 2003, FEMA became a "distinct entity" within the Department of Homeland Security ("DHS").[414] DHS is an executive agency.[415] Although FEMA is now part of DHS, the Secretary of the DHS is prohibited by statute from making significant changes to FEMA's "authorities, responsibilities, or functions . . . or the capability of the Agency to perform those missions."[416] The Administrator of FEMA is appointed by the President "with the advice and consent of the Senate."[417] "The Administrator is the principal advisor to the President, the Homeland Security Council, and the Secretary for all matters relating to emergency management in the United States."[418] "The President may designate the Administrator to serve as a member of the Cabinet in the event of natural disasters, acts of terrorism, or other man-made disasters."[419]

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[406] 15 U.S.C. § 2933 et seq.
[407] *Id.* at §§ 2933–2934.
[408] *See Id.* at § 2934.
[409] *See Id.* at § 2921; §§ 2932 – 2934.
[410] *See Id.* at § 2934(a).
[411] 42 U.S.C. § 1861 et seq.
[412] *Id.* at § 1861: "There is established in the executive branch of the Government an independent agency to be known as the National Science Foundation . . . ."
[413] *Id.* at § 1862(c).
[414] *See* 6 U.S.C. § 316. *See also* "Homeland Security Act of 2002," PL 107-296, 2002 HR 5005 § 503.
[415] *See Id.* at § 111. *See also* 5 U.S.C. § 101.
[416] *See Id.* at § 316(c)(1).
[417] *Id.* at § 313(c)(1).
[418] *Id.* at § 313(c)(4)(A).
[419] *Id.* at § 313(c)(5)(A).

The CCSP is an executive branch agency, but aspects of the CCSP's functions involve implementing research under the United States Global Research Act of 1990. (See footnotes 3 and 4.). The CCSP, inasmuch as it is the implementing agency for the CCRI, is completely under presidential control. See Proposal D-1 for details. The President's control over the statutory functions of the CCSP is more limited, although the USGCRA grants considerable discretionary authority to the President, as noted above.

The NSF, as noted above, is an independent agency, although its officials are appointed by the President subject to Senate confirmation. The President also has authority to direct the NSF to support research in the public interest.

Executive Orders. Forty five executive orders mention the Federal Emergency Management Agency—none are directly on point concerning the PCAP recommendation. There appear to be no executive orders relating directly to either the CCSP or the CCRI. Sixty-six executive orders mention the National Science Foundation. One of these orders, dating from 1954, "Administration of Scientific Research by Agencies of the Federal Government," is relevant; it is summarized in Proposal D-1. The action in that executive order is consistent with the authority currently given to the President by section 1862 to direct studies in the public interest, although it should be noted that the Order is so dated that it can serve only as an example of the type of action authorized, as there appears to have been no contemporaneous equivalent to the current section 1862. The NSF is frequently directed to coordinate with other agencies, for example to develop a national system of Marine Protected Areas[420] and to participate in the Interagency Council on Biobased Products and Bioenergy.[421] These executive orders seem to be generally consistent with the President's authority to direct NSF to support research efforts in the public interest.

Conclusion. The PCAP recommendation is within the President's authority, because the CCSP is an executive agency created by the President and clearly under presidential authority. Alternatively, the President may order CCSP to conduct the projection of liability pursuant to the USGCRA, because implementation of USGCRA research is explicitly delegated by Congress to the President, and because the objectives of the USGCRA include producing research on mitigating and adapting to climate change.[422] The President also has clear and explicit statutory authority to direct the National Science Foundation to support studies in the public interest,[423] making the NSF a good choice for sponsoring the liability projection. The President is within his authority to direct FEMA to take steps to mitigate budget impacts on the FFIP. FEMA is authorized by statute to "establish and carry out" the program, the objective of which is to create "reasonable method of sharing risk of flood losses" (see footnotes 5 and 6). Further, FEMA is

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[420] Exec. Order No. 13,158, 65 Fed. Reg. 34909 (May 26, 2000). Marine Protected Areas.
[421] Exec. Order No. 13,134, 64 Fed. Reg. 44639 (August 12, 1999). Developing and Promoting Biobased Products and Bioenergy.
[422] *See* 15 U.S.C. § 2933 ("The President shall establish an interagency United States Global Change Research Program to improve understanding of global change. The Program shall be implemented by the Plan developed under section 2934 of this title"), § 2934(d) ("The Plan shall provide recommendations for collaboration within the Federal Government and among nations to . . . combine and interpret data from various sources to produce information readily usable by policymakers attempting to formulate effective strategies for preventing, mitigating, and adapting to the effects of global change").
[423] 42 U.S.C. § 1862(c).

required to establish an advisory committee to make recommendations as to issues in administering the program (see footnote 7). The implication is that FEMA has the authority to take action to mitigate risk. The President has broad authority over the budget process which includes informational requests from agencies (see Proposal C-1). Further FEMA is an agency within DHS, which is an "executive department" within the meaning of Title V; thus, the President has the authority to direct FEMA to take the recommended action.

Good candidate to implement by executive order.

E. Mobilize the Marketplace

Direct the EPA to implement cap-and-auction system for GHG emissions, if Congress hasn't acted.

E-1

3. Cap and auction greenhouse gases.

To mobilize the marketplace to reduce greenhouse gas emissions, the President should support greenhouse gas pricing – a mechanism that adds a cost for greenhouse gas emissions onto the price of fossil fuels. If a pricing mechanism has not become law during the 110th Congress, the President should advocate that the 111th Congress approve an "upstream" cap-and-auction system that regulates the points at which fossil fuels enter the economy – the refinery gate in the case of petroleum, the first distribution point for natural gas, at the mine shipping terminus in the case of coal, and at the port in the case of imports.

By regulating only 1,500-2,000 upstream entities, this approach reduces administrative complexity, minimizes opportunities to cheat the system and helps ensure that greenhouse gas pricing is economywide.

In the event that Congress fails to pass a cap-and-auction regime, or to act on the issue in a timely manner, the President should direct the Environmental Protection Agency to implement a cap-and-auction regime. . . . PCAP Report 2:5.

Background. The Boundaries Report, Chapter VIII, section 3, specifically addresses this issue. In summary, it is the EPA's position that under the current authority of the CAA, specifically section 111 of the CAA,[424] the Agency by rulemaking can adopt a cap-and-trade[425] program as a standard for emissions regulation for stationary sources that emit criteria pollutants.[426] Applying this authority, the EPA undertook a rulemaking that implemented a cap-and-trade system for mercury.[427] Mercury, however, was initially designated as a hazardous air pollutant (HAP) and the EPA changed this designation to criteria pollutant, by "delisting" mercury, in order to pursue regulation in this manner. Section 111 applies to stationary sources of criteria pollutants, not sources of hazardous pollutants. The Clean Air Mercury Rule (CAMR) was challenged in court.

[424] Codified at 42 U.S.C. §7411.
[425] In terms of this legal analysis there is no distinction in a cap-and-trade or cap-and auction system.
[426] This analysis is premised on GHGs being designated as criteria pollutants. *See* Boundaries Report, Chapter VIII(2); *See also* Chapter II and Proposal B-7.
[427] *See* Rules and Regulations, Environmental Protection Agency: Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 70 Fed. Reg. 28606 (2005) (hereinafter "CAMR").

Subsequent to publication of the Boundaries Report, the U.S. Court of Appeals for the District of Columbia ruled on the challenge and struck down the rule based on the delisting of mercury.[428]

Statutes. There are two types of pollutants regulated under the CAA: criteria pollutants and hazardous pollutants. The initial list of hazardous pollutants is found in 42 U.S.C. § 7412(b)(1) and amendments to the list can only be made in a specified manner.[429] The two types of pollutants are regulated differently. GHGs would likely be designated as criteria pollutants.[430]

The primary method of regulation for stationary sources of criteria pollutants is for the EPA to set standards of performance for new and existing pollution-emitting sources.[431] A standard of performance is "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated."[432] It is the EPA's position that a cap-and-trade mechanism is a "standard of performance" that can be implemented under Section 111 to regulate emissions from stationary sources.[433]

The EPA was sued by States and environmental groups who challenged the CAMR. Part of their complaint is that mercury is a particularly harmful substance that is emitted from power plants that were formerly regulated as sources of HAPs under the CAA. They object to the removal of mercury from the Section 112 list. A cap-and-trade program would not be possible for HAPs because of the dangerous nature of the hazardous pollutants and the possibility of some sources actually increasing emissions of HAPs under such a scheme. That is, a cap-and-trade system would allow some sources to buy extra emissions credits and become local hot spots of dangerous mercury pollution.[434]

The court ruling was limited to the delisting of mercury. The court found that the EPA had no authority to delist mercury sources.[435] Thus, mercury remains a HAP and stationary sources of HAPs cannot be regulated under Section 111. The court did not reach the issue of whether a cap-and-trade system can be considered a standard of performance under the CAA for criteria

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[428] New Jersey v. Environmental Protection Agency (EPA), 517 F.3d 574 (D.C. Cir. 2008).
[429] 42 U.S.C. § 7412.
[430] HAPs are pollutants "which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise. . . ." 42 U.S.C. § 7412(b)(2).
[431] 42 U.S.C. § 7411.
[432] *Id*. at § 7411(a)(1).
[433] *See* CAMR, *supra*.
[434] *Id.* at Petitioner's brief, 2007 WL 2155488.
[435] *New Jersey v. EPA*, 517 F.3d 574.

pollutants. Further, courts give great deference to an executive department's construction of a statutory scheme it is entrusted to administer.[436]

There remain, however, two issues in terms of the specifics of this proposal. First, it does not appear that the EPA can mandate that all states participate in the cap-and-trade system. The CAA is set up to allow states flexibility in determining how to meet the standards promulgated by the EPA.[437] The EPA cannot mandate participation in a federal implementation plan program unless a state does not submit a satisfactory SIP-like plan to meet standards for a pollutant.[438] Second, the proposal envisions an upstream system. A stationary source is defined as "any building, structure, facility, or installation which emits or may emit any air pollutant."[439] It is unlikely upstream sources would fit within this definition.

Authority over the EPA. The EPA is neither an executive department nor an independent agency. In terms of the President's authority over agencies, generally, the President's authority over the EPA would be much the same as an executive department.[440] In terms of this specific proposal, however, there are indicators that the President's authority is more limited. The CAA delegates responsibility for implementation of the CAA directly to the EPA. Further, Section 111 explicitly states that it is the Administrator of the EPA that shall make the determination for the standard (see Statutes section above). Having the President determine the standard of performance under Section 111 would run contrary to the principle that reasoned decision-making and application of expert judgment remain with the agency, especially when the delegation is to the agency.

Executive Orders. We found no executive orders that direct the EPA to undertake a specific rulemaking such as that contemplated by this proposal. Of the orders that provide direction as to rulemaking, the direction is given in general terms: ensuring the coordinated and effective exercise of the authorities of the President and the heads of various agencies to further some particular policy (e.g., E.O. 13432, E.O. 12843, E.O. 11752); carrying out the purposes of an order (e.g., E.O. 11738); considering and providing certain information to OMB for proposed rules (e.g., E.O 13045); or after undertaking the study of an issue, making recommendations as to appropriate rulemaking (e.g. E.O. 13173 as amended by E.O. 13359). The directives do not order the specifics of the rule. The most closely related directive, E.O. 13158, orders the EPA and other agencies to begin rulemaking to address a specific concern. The directive does not order the specifics of the rule but suggests what the regulation may include:

> (f) To better protect beaches, coasts, and the marine environment from pollution, the Environmental Protection Agency (EPA), relying upon existing Clean Water Act authorities, **shall expeditiously propose new science-based regulations, as necessary, to ensure** appropriate levels of

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[436] The Supreme Court reinforced the idea that "considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer" and the principle of deference to administrative interpretations, *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 844 (1984); *see also*, Curtis A. Bradley, *Chevron Deference and Foreign Affairs*, 86 VA. L. REV. 649 (2000).
[437] Boundaries Report, Chapter VI(1)(a)-(c).
[438] 42 U.S.C. § 7410.
[439] *Id.* at § 7411(a)(3).
[440] Boundaries Report, Chapter VI(1)(c).

> protection for the marine environment. **Such regulations may include** the identification of areas that warrant additional pollution protections and the enhancement of marine water quality standards. The EPA shall consult with the Federal agencies identified in subsection 4(a) of this order, States, territories, tribes, and the public in the development of such new regulations.[441]

These executive orders are consistent with our evaluation of the President's authority over the EPA.

Conclusion. There is a basis to support the conclusion that the EPA has the authority to implement a cap-and-auction system as a performance standard under the current authority of the CAA, although this approach is novel and one that the courts have not yet ruled upon. However, the proposal does not contemplate a voluntary scheme and it proposes an upstream system. The CAA in its current form does not support these two aspects of the cap-and-auction system. Finally, the proposal as contemplated oversteps the boundary of the President's authority over the EPA under these circumstances, and there is no history of directing the EPA by executive order to undertake a rule as specific in its character as this. As an alternative the President may direct the EPA *to consider* a cap-and-auction system as a performance standard under Section 211, leaving the ultimate determination under Section 211 to the Agency. This would be in conjunction with Proposal B-7 directing the EPA to begin regulation of GHGs under the CAA. If the directive is issued in isolation a presidential memorandum should be considered.[442]

Poor candidate to implement by executive order. Alternative suggested.

[441] Exec. Order No. 13158, Marine Protected Areas, section 4(f), (May 26, 2000).
[442] Legally, the type of directive is not at issue. However, as a matter of practice memorandum may be more fitting for the suggested alternative.

Direct the Council on Environmental Quality to expedite the development of national sustainability indicators, including indicators to objectively measure the nation's progress on reducing greenhouse gas emissions.

E-2

Direct the White House Council on Environmental Quality to develop performance indicators to measure the nation's progress on reducing greenhouse gas emissions. Indicators should include macro-measures – for example, average annual temperatures, rainfall patterns, isotherm migration, major wildfires, extreme weather events, increases or decreases in disease vectors, coastal water levels, loss of native plant and animal species, insurance liabilities and other factors that scientists have concluded are, or will be, affected by global warming – as well as micro-measures important to individual consumers and families, including energy prices and per capita greenhouse gas emissions. The CEQ should publish these indicators in an annual State of the Climate report released in conjunction with the President's State of the Union address. PCAP Report 2:8.

Background. The "performance indicators" referenced in the above-quoted section of the PCAP report are sustainability indicators. They are indicators that will play a key role in guiding the United States toward sustainable development.[443] The Council on Environmental Quality (CEQ) is leading a process to develop a framework for, and coordinate work on, indicators of sustainability for the United States.

Statutes. The duties and function of the CEQ are described at 42 U.S.C. § 4344. The most relevant are:

* * * * *

> **(2)** to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in subchapter I of this chapter, and to compile and submit to the President studies relating to such conditions and trends;
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> * * * * *
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> **(5)** to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality;

[443] See PCAP Report, 1:25-26.

> **(6)** to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;
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> **(7)** to report at least once each year to the President on the state and condition of the environment; and
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> **(8)** to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

The Office of Environmental Quality (the Office) is established in the Executive Office of the President (EOP) and provides the professional and administrative staff for the CEQ. The Chairman of the CEQ is the Director of the Office.[444] The Director shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality. The duties of the Director are described in 42 U.S.C. § 4372(d), and the most relevant are:

> * * * * *
>
> **(3)** reviewing the adequacy of existing systems for monitoring and predicting environmental changes in order to achieve effective coverage and efficient use of research facilities and other resources;
>
> **(4)** promoting the advancement of scientific knowledge of the effects of actions and technology on the environment and encourage the development of the means to prevent or reduce adverse effects that endanger the health and well-being of man;
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> * * * * *
>
> **(6)** assisting the Federal departments and agencies in the development and interrelationship of environmental quality criteria and standards established through the Federal Government; and
>
> **(7)** collecting, collating, analyzing, and interpreting data and information on environmental quality, ecological research, and evaluation.

This proposal falls squarely within the mission of the Council.

Work on sustainability indicators is already proceeding under the CEQ. The Interagency Working Group on Sustainable Development Indicators (SDI Group) reports to the CEQ. Since its conception in January 1994, the SDI Group has provided a forum for the exchange of ideas,

[444] 42 U.S.C. §§ 4371(c)(2), 4372(a).

methods, and data related to sustainable development indicators. Throughout 1995, the SDI Group provided information and advice to the President's Council on Sustainable Development. As part of the SDI Group, CEQ roundtables have been established for forests, rangelands, minerals and water resources.[445]

Authority over the Agency. The CEQ, by statute, is established in the EOP. The CEQ is comprised of three members who are not only appointed by the President, but by statute "serve at his pleasure," by and with the advice and consent of the Senate. Further, the President designates the Chairman from one of the members of the CEQ. By statute, however, the members must have certain qualifications: "[e]ach member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds; to appraise programs and activities of the Federal Government in the light of the policy set forth in subchapter I of this chapter; to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment."[446] Based on these attributes, (e.g., located in the EOP, appointed by the President, serve at the pleasure of President) the authority of the President is at its peak over an entity such as the CEQ.[447]

In addition, the duties of the CEQ are explicitly tied to assisting the President. It is the duty and function of the CEQ to compile and submit to the President studies relating to conditions and trends; review and appraise the various programs and activities of the Federal Government and to make recommendations to the President with respect thereto; to develop and recommend to the President national policies; to report at least once each year to the President on the state and condition of the environment; and to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.[448]

The Office of Environmental Quality is also established in the EOP. In carrying out his functions as the Director of the Office, the Chairman of the CEQ "shall assist and advise the President on policies and programs of the Federal Government affecting environmental quality."[449]

Executive Orders. There are numerous executive orders that direct agencies to proceed expeditiously on a matter. For example, E.O. 13158 directs the EPA to begin rulemaking to address the protection of beaches, coasts, and the marine environment from pollution and to

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[445] Information about the SDI Group is available at the NASA Website: http://www.hq.nasa.gov/iwgsdi/SDI_Org_SDI_Group.html. Information about the roundtables is available at the SDI Web site: http://www.sdi.gov/#link8.
[446] 42 U.S.C. § 4342.
[447] *See* Boundaries Report, Chapter VI, Intro., 1(b), 1(c).
[448] 42 U.S.C. § 4344.
[449] *Id.* at § 4372(d).

expeditiously propose new regulations.[450] Further, there are numerous executive orders that demand immediacy.[451]

Conclusion. The President has the authority to order the CEQ to expedite the development of national sustainability indicators. This falls squarely within the CEQ's mission and the President's authority over the CEQ is substantial.

Good candidate to implement by executive order.

[450] Exec. Order No. 13,158, Marine Protected Areas, sec. 2(f), (May 26, 2000); *see also*, *e.g.*, Exec. Order Nos.: 13274 (agencies shall to the maximum extent practicable expedite their reviews for relevant permits or other approvals, and take related actions as necessary); 13212 (agencies shall expedite projects that will increase the production, transmission, or conservation of energy, expedite their review of permits or take other actions as necessary); 13139 (expeditiously review waiver requests); 13101 (expedite the process of designating items that are or can be made with recovered materials); 12333 (procedures required by this Order shall be established as expeditiously as possible); 12153 (the Secretary shall expeditiously conduct a public inquiry as to what other types of heavy crude oil, if any, should be exempted from price controls).

[451] E.g., Exec. Order Nos.: 13186 (agencies are encouraged to immediately begin implementing the conservation measures set forth above); 13271 (the Attorney General shall immediately establish within the Department of Justice a Corporate Fraud Task Force); 13103 (agencies are encouraged to immediately test and evaluate the principles and concepts contained in the EPA's guidance on the Acquisition of Environmentally Preferable Products).

F. Build Public-Private Partnerships for Climate Protection

Create the following presidential commissions and White House Conferences to develop recommendations on national climate change policies.

F1-11

1) Energy Security and Climate Stabilization Board. The Board will consist of the nation's top corporate and financial experts and will recommend a roadmap to a post-carbon U.S. economy, which will include recommendations on market mechanisms, regulatory reforms, trade policies and barrier busting. PCAP Report 1:29.

2) Presidential Commission on Energy Independence. The Commission will be charged with creating a roadmap to a 50% reduction in oil consumption by 2020 and elimination of oil imports by 2050. PCAP Report 4:4.

3) Presidential Commission on Water Resource Management. The Commission will be comprised of the EPA, USDA, leaders of the federal Climate Change Science Program, the Department of Energy, and appropriate regional, state and local officials to draft a national water management policy. The policy will incorporate pollution prevention (including nutrient management requirements), protection and restoration of wetlands and other coastal and riverine ecosystems, phase-out of irrigation subsidies that promote unsustainable water use, etc. PCAP Report 5:6-7, 9:7-8.

4) Presidential Commission on Intergovernmental Climate Action. With representation from key federal agencies and leading governors and mayors, the Commission will develop a coordinated intergovernmental strategy to mitigate and adapt to climate change. PCAP Report 11:3.

5) Presidential Commission on Carbon Subsidies. In year one, the Commission will develop recommendations on federal subsidy reforms to ensure they effectively support the goals of national energy and climate security. In year two, the Commission will develop a non-severable list of subsidies that it recommends be terminated using an inventory of federal carbon subsidies developed by the Department of Treasury and other agencies. PCAP Report 1:17-20.

6) Presidential Commission on America's Rural Renaissance. The USDA, DOE, EPA and other relevant federal agencies will work with rural and agricultural leaders to frame a strategy that revitalizes rural America by making it America's principal supplier of

renewable energy and the principal source of carbon sequestration services. Not in Report; but see PCAP Report Chapter 3.

7) White House Conference on Intergovernmental Climate Action. Leading governors and mayors will convene to identify the principles, framework and next steps for a coordinated intergovernmental strategy designed to mitigate and adapt to climate change. PCAP Report 14:4.

8) White House Conference on Climate Equity. With participation by think tanks and representatives of groups most adversely affected by climate change and climate policies, the objective of the conference will be to devise recommendations on ways to help affected families, workers, businesses, communities and industries cope. PCAP Report 1:28.

9) White House Conference on Climate Liability. The conference will convene the National Association of Insurance Commissioners, Ceres, the Climate Project and others to identify insurance industry programs to reduce liability related to climate change, such as consumer education programs, new rate incentives for zero-carbon and disaster resistant buildings, public-private partnerships to spread risks, and higher bond ratings for communities that adopt programs and development practices to reduce GHG emissions. PCAP Report 1:28.

10) White House Conference on Disaster Prevention and Response. With participation by the Federal Emergency Management Agency, the National Association of State Floodplain Managers and other appropriate stakeholders, the conference will propose changes in federal coastal zone and floodplain regulations and policies commensurate with predicted impacts of climate change. Among other topics, the conference will consider whether federal policies on relocation and evacuation from hazard zones should be redrawn. See, e.g., PCAP Report 11:6-7 and 10.

11) White House Conference on Environmental Education. The Department of Education, the EPA, and stakeholder groups will convene to recommend improvements in K-12 environmental education. PCAP Report 9:8.

Background. The President has broad authority to establish entities and convene groups such as committees, commissions, task forces, working groups, conferences, etc. (hereinafter "committees") to obtain advice or information. It is common practice to establish these entities by executive order as well as presidential memorandum. Legally there is no requirement to use one or the other; however, executive orders are subject to the Federal Register Act and are

printed in the *Federal Register* and Title 3 of the *Code of Federal Regulations*.[452] The *Federal Register* is replete with executive orders establishing committees, commissions, task forces and the like. Notwithstanding this broad authority, there are some statutes that bear on the matter, primarily the Federal Advisory Committee Act (FACA),[453] which applies to committees not wholly comprised of federal employees, such as those contemplated by this proposal.

The Federal Advisory Committee Act (FACA). A key purpose of FACA is open and efficient government.[454] Thus, it does not restrict the establishment of advisory committees by the President, per se; rather it mandates certain procedural requirements, primarily:

- *Meetings must be open to the public and the public must be permitted to present their views.*
- *All meeting minutes and reports must be available for public access.*
- *The public must be notified of meetings by advertisement in the* Federal Register.[455]

Further, there are guidelines that the President must follow "to the extent applicable" when creating an advisory committee, such as:

- *Committee membership must be balanced by points of view.*
- *Provisions must be made to ensure that the advice and recommendations of the committee will not be inappropriately influenced by the appointing authority or by any special interest.*[456]

Committees Subject to FACA. FACA is fairly all-inclusive. The term "advisory committee" means any committee, board, commission, council, conference, panel, task force, or other similar group, or any subcommittee or other subgroup thereof which is established by statute or reorganization plan, established or utilized by the President, or established or utilized by one or more agencies, in the interest of obtaining advice or recommendations for the President or one or more agencies or officers of the Federal Government.[457]

Exceptions to FACA (committees not subject to the requirements of the statute) include:

(1) any committee that is composed wholly of full-time, or permanent part-time, officers or employees of the Federal Government; (2) any committee that is created by the National Academy of Sciences or the National Academy of Public Administration; and (3) any committee established or utilized by the Central Intelligence Agency or the Federal Reserve System.[458]

A committee is considered within the first exception if only federal employees have voting authority. Participation in committee meetings and activities does not automatically make a person a member of a committee, even if there is influential participation. The outsider might

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[452] *See* Boundaries Report, Chapter 2(1) and (2).
[453] 5 U.S.C. App. 2 §§ 1-16.
[454] *Id*. at § 2.
[455] *Id.* at App. 2 § 10.
[456] *Id*. at § 5(b).
[457] *Id*. at § 3(2).
[458] *Id*. at § 3(2)(c), § 4.

make an important presentation, he might be persuasive, the information he provides might affect the committee's judgment; however, if he has neither a vote nor a veto over the advice the committee renders to the President, he is not a committee member.[459] Thus, if there are non-federal employees who participate in a committee but do not have voting authority, or authority to veto a committee's consensus decisions, FACA, including the open meeting requirements, does not apply.[460]

Exceptions to particular FACA requirements include: 1) if the President determines for reasons of national security, notice of meetings may not be published or provided;[461] and 2) any portion of a committee meeting may be closed to the public and interested persons where the President, or the head of the agency to which the advisory committee reports, determines that such portion of such meeting may be closed in accordance with 5 U.S.C. § 552b(c), the open meetings law.[462] This exception is intended to prevent disclosure of certain types of information, for example, matters that are specifically authorized under criteria established by an executive order to be kept secret in the interests of national defense or foreign policy; matters that relate solely to the internal personnel rules and practices of an agency; matters that are specifically exempted from disclosure by statute; disclosures that are trade secrets and commercial or financial information obtained from a person and privileged or confidential. There are 10 categories of exceptions in this provision.

Functions of FACA Committees. *Although the function of an advisory committee is to be "advisory only," drafting policy proposals, recommendations and plans are appropriate functions for a FACA committee.[463] For example, an advisory committee created by the Department of Energy, the Energy Policy Task Force, prepared the National Energy Plan draft.[464]*

Timing. Unless renewed by the President, an advisory committee shall terminate two years after the date it is established.[465] The President can terminate a committee prior to that time by executive order.

Designated Federal Officer. There shall be designated an officer or employee of the Federal Government to chair or attend each meeting of each advisory committee. The officer or employee so designated is authorized, whenever he determines it to be in the public interest, to adjourn any such meeting. No advisory committee shall conduct any meeting in the absence of

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[459] *In re* Cheney, 406 F.3d 723, 728 (C.A.D.C. 2005).
[460] There are other considerations in determining whether a person is a "member" of a committee. *See* GSA, Federal Advisory Committee Management, Advice and Guidance, "When FACA is and is not Applicable to Interactions with the Private Sector", *available at* http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentType=GSA_BASIC&contentId=10348&noc=T (e.g., obtaining information or viewpoints from individual attendees as opposed to advice, opinions or recommendations from the group acting in collective mode; regularity of participation, etc.). However, PCAP is committed to restoring trust in government through transparent and open proceedings so this is not addressed in detail here.
[461] 5 U.S.C. App.2 § 10(a)(2).
[462] *Id*. at § 10(d).
[463] *Id*. at § 9(b).
[464] *See* 60 Comp. Gen. 386, B-202455, 1981 WL 22494 (Comp. Gen.); 5 U.S.C. App. 2 § 9(b).
[465] 5 U.S.C. App. 2 § 14(a)(2).

that officer or employee. Advisory committees shall not hold any meetings except at the call of, or with the advance approval of, a designated officer or employee of the Federal Government.[466] This is especially relevant to the establishment of the Energy Security and Climate Stabilization Board (number 1 above) as it is not clear if PCAP contemplates any government members.

Good candidates to implement by executive order subject to the requirements of the Federal Advisory Committee Act.

[466] *Id*. at § 10(e), (f).

IV. Conclusion

With only a few exceptions, the proposals selected by PCAP as priorities are good candidates to implement by executive directive, and the vast majority of these by executive order. In some cases some improvements were suggested which would, for example, provide additional credibility or make a clarification. In some cases an alternative form was suggested, primarily based on convention, and typically the suggestion was to issue a presidential proclamation or presidential memorandum rather than an executive order. In the few cases that the proposal was not a good candidate to implement by executive directive, we were able to propose alternative actions.

The high percentage of good candidates is not surprising as this was not a random sample of proposals in terms of taking action by an executive directive. Prior to undertaking this phase of the project, PCAP commissioned CEES to prepare the Boundaries Report which is the companion to this report. The Boundaries Report establishes the general parameters regarding the use of executive authority and identifies several areas where executive action would be most effective (e.g., management of federal operations and procurement). The Boundaries Report is framed in terms of taking action within the limits of, and with respect for, the U.S. Constitution and emphasizes the balance of power or boundary between the executive and legislative branches of the federal government. Thus, PCAP had a guide or reference which it used in selecting the priority list from the Presidential Climate Action Plan. The results of this report demonstrate how a proactive administration with an understanding of the serious implications of climate change can make a significant impact immediately upon taking office. The following table summarizes our conclusions based on the analysis in this report:

A-01	Reduce CO_2 emissions at least 80% by 2050, compared to 1990, and at least 25% by 2020.	Good candidates to implement by executive directive. Alternative form recommended.
A-02	Reduce national petroleum consumption 50% by 2020, with no increase in domestic production.	Good candidates to implement by executive directive. Alternative form recommended.
A-03	Reduce vehicle miles traveled 20% by 2020; 50% by 2050.	Good candidates to implement by executive directive. Alternative form recommended.
A-04	Reduce per capita carbon emissions by half.	Good candidates to implement by executive directive. Alternative form recommended.
A-05	Obtain 25% of electric generation from renewable sources by 2025.	Good candidates to implement by executive directive. Alternative form recommended.

A-06	Reduce economy-wide energy demand at least 2.5% annually, leading to a reduction of 25% by 2020 and 50% by 2030.	Good candidates to implement by executive directive. Alternative form recommended.
A-07	Increase CAFÉ standard for passenger vehicles and light trucks to 50 mpg by 2020, and 200 mpg by 2050.	Good candidates to implement by executive directive. Alternative form recommended.
B-01	Direct EPA to accelerate its efforts to capture methane and convert it to useful energy at the Nation's 1,650 landfills.	Good candidate to implement by executive order.
B-02	If it hasn't done so by Inauguration, direct the Federal Trade Commission to work with the carbon offset industry to create voluntary standards and an approved third-party certification process for greenhouse gas offset programs. Base the standards on EPA's criteria for crediting air pollution mitigation measure under the Clean Air Act (quantifiable, permanent, new, etc.)	Poor candidate to implement by executive order. Alternative action suggested.
B-03	Direct DOE to develop a registry of energy technologies that should be given highest priority in national policy because they reduce vulnerability to terrorist attack on US infrastructure and energy supplies. Use the registry to support a request to Congress to give priority funding to these technologies.	Good candidate to implement by executive order.
B-04	Direct the Secretary of Energy to publish new criteria for loans made under the U.S. Department of Agriculture's (USDA's) Rural Development Utilities Program, and direct the Department of Agriculture to prohibit loans for the construction of coal-fired power plants that are not able to fully capture and sequester their carbon emissions. Further, direct the USDA to place high priority on loans that result in greater use of distributed energy systems that extend electric infrastructure to stranded renewable energy resources that increase the generation of electricity from landfill and agricultural methane, etc.	Good candidate to implement by executive order, with clarification. Specific language suggested
B-05	Direct the EPA to work with the Chicago Climate Exchange to design a program that permits utilities to trade efficiency credits, similar to cap-and-trade for carbon.	Good candidate to implement by executive order. Improvements suggested.
B-06	Direct the National Intelligence Council to conduct a National Intelligence Estimate on the security implications of continued dependence on imported oil, uranium, natural gas and other finite resources, given the prospect of peak oil land current trends in global supplies and demand of other critical, finite resources.	Good candidate to implement by executive directive. Alternative form suggested.
B-07	Direct the EPA to immediately begin regulating GHG emissions under the Clean Air Act	Good candidate to implement by executive order, with a clarification. Improvements suggested.
B-08	Direct the EPA to immediately grant California's waiver for vehicle	Poor candidate to implement by

	emissions standards.	executive order. Alternative action suggested.
B-09	Direct the EPA and DOE to collaborate with the American Truck Association to determine appropriate incentives to increase the use of wide-base tires.	Good candidate to implement by executive order. Improvements suggested.
B-10	Direct the DOT to develop a Freight Task Force to propose incentives for making GHG reduction technologies more readily available to freight movement providers, to add GHG reduction as an eligible activity for incentives under EPA's Voluntary Diesel Retrofit Program, and to create a plan to change grade and signaling system requirements so that railways can safely accommodate lighter trains that use less fuel.	Good candidate to implement by executive order.
B-11	Direct the DOT, the Department of Aviation and the Federal Rail Administration to determine if current rail-safety requirements are relevant for high-speed rail technology.	Good candidate to implement by executive order. Improvements suggested.
B-12	Direct the DOT to reconvene the Climate VISION Program, in which 14 major industrial sectors worked with federal agencies to develop support for high-speed rail.	Good candidate to implement by executive order.
B-13	Direct NASA to restore earth science language in the agency's mission statement and priorities.	Good candidate to implement by executive order.
B-14	Direct the Council on Environmental Quality (CEQ) to enter into talks with Congressional leaders to define "climate change emergency."	Good candidate to implement by executive directive. Alternative form suggested.
C-01	Direct agencies to include carbon impact statements in their submissions to OMB, legislative proposals and reports to Congress and the American people.	Good candidate to implement by executive order (3 parts).
C-02	Federal Energy Management Executive Order:	Good candidates to implement by executive order.
C-02.1	Zero net emission goals for buildings	
C-02.2	Renewable energy goals	Good candidates to implement by executive order.
C-02.3	GHG emission reduction goals	Good candidates to implement by executive order.
C-02.4	GHG reduction goals for transportation activities	Good candidates to implement by executive order.
C-02.5	Enforcement procedures for meeting goals	Good candidates to implement by executive order.
C-02.6	Conduct Audits	Good candidates to implement by

		executive order.
C-02.7	Submit sufficient budget requests	Good candidates to implement by executive order.
C-02.8	Goals and incentives for suppliers	Good candidates to implement by executive order.
C-02.9	Link energy efficiency and emissions goals to financial assistance	Good candidates to implement by executive order.
C-03	Declare that it is the responsibility of the federal government to protect the atmosphere and related natural systems as a global commons and public trust. Declare that protection of the atmosphere is a principal duty of federal program managers and incorporate that responsibility into managers' performance standards and ratings.	
C-03.1	3.1. Declaring that the Atmosphere is a Global Commons that should be Protected	3.1 Aspirational Declaration: Good candidate to implement with executive directive. Alternative form suggested.
C-03.2	3.2 Declaring that it is the responsibility of federal employers to protect the atmosphere as a global commons (or public trust) and incorporating that responsibility into performance standards and ratings.	3.2 Incorporating the principle into federal management responsibilities: Questionable candidate (or good candidate with a significant caveat) to implement by executive order.
C-04	The President should require that all federal agencies include an analysis of the effects of federal actions on global warming as part of any NEPA assessment process. The President should direct the CEQ to provide guidance in the selection and development of protocols and procedures to guide comprehensive, quantitative assessments of GHG emissions for every action subject to NEPA.	Good candidate to implement by executive order.
D-01	Direct the federal Climate Change Science Program and/or the National Science Foundation to project future taxpayer exposure under the Federal Crop Insurance Program based on projected impacts of climate change on U.S. agriculture.	Good candidate to implement by executive order.
D-02	Direct the federal Climate Change Science Program and/or the National Science Foundation to project future taxpayer exposure under the National Flood Insurance Program, based on projected impacts of climate change on the frequency and intensity of coastal and riverine flooding. Mitigate budget impacts on flood insurance program.	Good candidate to implement by executive order.
E-01	Direct the EPA to implement cap-and-auction system for GHG emissions, if Congress hasn't acted.	Poor candidate to implement by executive order. Alternative suggested.

E-02	Direct the Council on Environmental Quality to expedite the development of national sustainability indicators, including indicators to objectively measure the nation's progress on reducing greenhouse gas emissions.	Good candidate to implement by executive order.
F1-11	Create the following presidential commissions and White House Conferences to develop recommendations on national climate change policies.	Good candidates to implement by executive order subject to the requirements of the Federal Advisory Committee Act.

Appendix A
Statutes with Specific Terms Related to Global Warming

The following is a listing of, and excerpts from, provisions in the U.S. Code (USC) containing any one of the following terms: "greenhouse gas," "global warming" or "climate change."[1] The excerpts are limited to those parts of the statutory provisions explicitly containing the specified terms.[2] When necessary, a brief explanation of the overall statute is included in brackets "[]" to provide context.

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2 USCA § 1824
Title 2. The Congress
Chapter 28. Architect of the Capitol
Subchapter II. General Powers and Duties

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§ 1824. Energy and environmental measures in Capitol Complex Master Plan

(a) In general

To the maximum extent practicable, the Architect of the Capitol shall include energy efficiency and conservation measures, **greenhouse gas** emission reduction measures, and other appropriate environmental measures in the Capitol Complex Master Plan.

(b) Report

Not later than 6 months after December 19, 2007, the Architect of the Capitol shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Rules and Administration of the Senate, a report on the energy efficiency and conservation measures, **greenhouse gas** emission reduction measures, and other appropriate environmental measures included in the Capitol Complex Master Plan pursuant to subsection (a) of this section.

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7 USCA § 6701
Title 7. Agriculture
Chapter 96. Global Climate change

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§ 6701. Global Climate change Program

(a) Establishment

For the purpose of having within the Department of Agriculture a focal point for coordinating all issues of **climate change**, the Secretary of Agriculture (hereafter in this chapter referred to as the "Secretary") shall establish a Global **Climate change** Program (hereafter in this section referred to as the "Program"). The Secretary shall designate a director of the Program who shall be responsible to the Secretary for carrying out the duties specified in subsections (b) and (c) of this section.

(b) General duties

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[1] In a few cases "global change" was also included. These are current as of April 9, 2008.

[2] There is not a consistent indicator for a text jump within the provisions, but a discontinuity in the numbering or lettering indicates the omission of material before or after the relevant portion. For the full text of these provisions, the reader is referred to the U.S. Code

The Director shall--
(1) coordinate policy analysis, long range planning, research, and response strategies relating to **climate change** issues;
(2) provide liaison with other Federal agencies, through the Office of Science and Technology Policy, regarding issues of **climate change**;
(3) inform the Department of scientific developments and policy issues relating to the effects of **climate change** on agriculture and forestry, including broader issues that affect the impact of **climate change** on the farms and forests of the United States;
(4) recommend to the Secretary alternative courses of action with which to respond to such scientific developments and policy issues; and
(5) ensure that recognition of the potential for **climate change** is fully integrated into the research, planning, and decision-making processes of the Department.
(c) Specific responsibilities

The Director shall--
(1) coordinate the global **climate change** studies required by section 6702 of this title;
(2) provide, through such other agencies as the Secretary determines appropriate, competitive grants for research in climatology relating to the potential impact of **climate change** on agriculture;
(3) coordinate the participation of the Department in inter-agency climate-related activities;
(4) consult with the National Academy of Sciences and private, academic, State, and local groups with respect to climate research and related activities;
(5) represent the Department to the Office of Science and Technology Policy and coordinate the activities of the Department in response to requirements of this chapter;
(6) represent the Department on the Intergovernmental Panel on **Climate change**; and
(7) review all Department budget items relating to **climate change** issues, including specifically the research budget to be submitted by the Secretary to the Office of Science and Technology Policy and the Office of Management and Budget.

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7 USCA § 6702

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§ 6702. Study of global climate change, agriculture, and forestry

(a) Crops

(1) In general
The Secretary shall study the effects of global **climate change** on agriculture and forestry. The study shall, at a minimum address--
(A) the effects of simultaneous increases in temperature and carbon dioxide on crops of economic significance;
(B) the effects of more frequent or more severe weather events on such crops;
(C) the effects of potential changes in hydrologic regimes on current crop yields;
(D) the economic effects of widespread and increased drought frequency in the south, midwest, and plains States; and
(E) changes in pest problems due to higher temperatures.
(2) Further studies
If the results of the study conducted under paragraph (1) warrant, the Secretary shall conduct further studies that address the means of mitigating the effects of global **climate change** on crops of economic significance that shall, at a minimum--
(A) identify whether **climate change** tolerance can be bred into these crops, the amount of time necessary for any such breeding, and the effects on the income of farmers;
(B) evaluate existing genetic resource and breeding programs for crops for their ability to develop new varieties that can tolerate potential **climate changes**; and

(C) assess the potential for the development of crop varieties that are tolerant to **climate changes** and other environmental stresses, such as drought, pests, and salinity.
(b) Forests

The Secretary shall conduct a study on the emissions of methane, nitrous oxide, and hydrocarbons from tropical and temperate forests, the manner in which such emissions may affect global **climate change**; the manner in which global **climate change** may affect such emissions; and the manner in which such emissions may be reduced through management practices. The study shall, at a minimum--
(1) obtain measurements of nitrous oxide, methane, and nonmethane hydrocarbons from tropical and temperate forests;
(2) determine the manner in which the nitrous oxide, methane, and nonmethane hydrocarbon emissions from temperate and tropical forest systems will respond due to **climate change**; and
(3) identify and address alternative management strategies for temperate and tropical forests that may mitigate any negative effects of global **climate change**.

(c) Reports

The Secretary shall submit reports of the studies conducted under subsections (a) and (b) of this section within 3 and 6 years, respectively, after November 28, 1990, to the Committee on Agriculture and the Committee on Science, Space, and Technology of the House of Representatives, and the Committee on Agriculture, Nutrition, and Forestry of the Senate. In addition, interim reports regarding such studies shall be provided by the Secretary to such Committees annually, with recommendations for actions which may be taken to mitigate the negative effects of global **climate change** and to adapt to global **climate changes** and related phenomena.

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7 USCA § 6706

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§ 6706. Institutes of Tropical Forestry

The Secretary is authorized and directed to establish an Institute of Tropical Forestry in Puerto Rico and an Institute of Pacific Islands Forestry (hereafter in this section referred to as the “Institutes”). The Institutes shall conduct research on forest management and natural resources that shall include—
(1) management and development of tropical forests;
(2) the relationship between **climate change** and tropical forests;
(3) threatened and endangered species;
(4) recreation and tourism;
(5) development of tropical forest resources on a sustained yield basis;
(6) techniques to monitor the health and productivity of tropical forests;
(7) tropical forest regeneration and restoration; and
(8) the effects of tropical deforestation on biodiversity, global climate, wildlife, soils, and water.

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7 USCA § 6711

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§ 6711. Carbon cycle research

(a) In general

To the extent funds are made available for this purpose, the Secretary shall provide a grant to the Consortium for Agricultural Soils Mitigation of **Greenhouse gases**, acting through Kansas State University, to develop, analyze, and implement, through the land grant universities described in subsection (b) of this section, carbon cycle research at the national, regional, and local levels.

7 USCA § 8601
Title 7. Agriculture
Chapter 112. Biomass Research and Development

§ 8601. Findings

Congress finds that:
(1) conversion of biomass into biobased industrial products offers outstanding potential for benefit to the national interest through--
(A) improved strategic security and balance of payments;
(B) healthier rural economies;
(C) improved environmental quality;
(D) near-zero net **greenhouse gas** emissions;

(3) biobased fuels, such as ethanol, have the clear potential to be sustainable, low cost, and high performance fuels that are compatible with both current and future transportation systems and provide near-zero net **greenhouse gas** emissions;

7 U.S.C.A. § 8606

§ 8606. Biomass Research and Development Initiative

(5) the improvement and development of analytical tools to facilitate the analysis of life-cycle energy and **greenhouse gas** emissions, including emissions related to direct and indirect land use changes, attributable to all potential biofuel feedstocks and production processes; and

[Establish and carry out a Biomass Research and Development Initiative under which competitively awarded grants, contracts, and financial assistance are provided to, or entered into with, eligible entities to carry out research on, and development and demonstration of, biobased fuels and biobased products, and the methods, practices and technologies, for their production.]

10 U.S.C.A. § 2902
Title 10. Armed Forces
Subtitle A. General Military Law
Part IV. Service, Supply, and Procurement
Chapter 172. Strategic Environmental Research and Development Program

§ 2902. Strategic Environmental Research and Development Program Council

(5) provide for the identification and support of research, development, and application of other technologies developed for national defense purposes which not only are directly useful for programs, projects, and activities of such departments, but also have useful applications for solutions to such national and international environmental problems as **climate change** and ozone depletion;

15 U.S.C.A. § 657h
Title 15. Commerce and Trade
Chapter 14A. Aid to Small Business

§ 657h. Small business energy efficiency

(2) Program required
The Administrator shall develop and coordinate a Government-wide program, building on the Energy Star for Small Business program, to assist small business concerns in--
(A)becoming more energy efficient;
(B) understanding the cost savings from improved energy efficiency; and
(C) identifying financing options for energy efficiency upgrades.

(vii)assist owners of small business concerns with the development and commercialization of clean technology products, goods, services, and processes that use renewable energy sources, dramatically reduce the use of natural resources, and cut or eliminate **greenhouse gas** emissions through--
(I) technology assessment;
(II)intellectual property;
(III) Small Business Innovation Research submissions under section 638 of this title;
(IV) strategic alliances;
(V) business model development; and
(VI) preparation for investors; and
(VII) help small business concerns improve environmental performance by shifting to less hazardous materials and reducing waste and emissions, including by providing assistance for small business concerns to adapt the materials they use, the processes they operate, and the products and services they produce.

15 U.S.C.A. § 695
Title 15. Commerce and Trade
Chapter 14b. Small Business Investment Program
Subchapter V. Loans to State and Local Development Companies

§ 695. State development companies

(a) Congressional finding and declaration of purpose

The Congress hereby finds and declares that the purpose of this subchapter is to foster economic development and to create or preserve job opportunities in both urban and rural areas by providing long-term financing for small business concerns through the development company program authorized by this subchapter.

(b) Loans; obligations of development companies

The Administration is authorized to make loans to State development companies to assist in carrying out the purposes of this chapter. Any funds advanced under this subsection shall be in exchange for obligations of the development company which bear interest at such rate, and contain such other terms, as the Administration may fix, and funds may be so advanced without regard to the use and investment by the development company of funds secured by it from other sources.

(d) Eligibility for assistance

In order to qualify for assistance under this subchapter, the development company must demonstrate that the project to be funded is directed toward at least one of the following economic development objectives--

(1) the creation of job opportunities within two years of the completion of the project or the preservation or retention of jobs attributable to the project;
(2) improving the economy of the locality, such as stimulating other business development in the community, bringing new income into the area, or assisting the community in diversifying and stabilizing its economy; or
(3) the achievement of one or more of the following public policy goals:

(F) enhanced economic competition, including the advancement of technology, plan retooling, conversion to robotics, or competition with imports,
(G) changes necessitated by Federal budget cutbacks, including defense related industries,
(H) business restructuring arising from Federally mandated standards or policies affecting the environment or the safety and health of employees,
(I) reduction of energy consumption by at least 10 percent,
(J) increased use of sustainable design, including designs that reduce the use of greenhouse gas emitting fossil fuels, or low-impact design to produce buildings that reduce the use of non-renewable resources and minimize environmental impact, or
(K) plant, equipment and process upgrades of renewable energy sources such as the small-scale production of energy for individual buildings or communities consumption, commonly known as micropower, or renewable fuels producers including biodiesel and ethanol producers.
If eligibility is based upon the criteria set forth in paragraph (2) or (3), the project need not meet the job creation or job preservation criteria developed by the Administration if the overall portfolio of the development company meets or exceeds such job creation or retention criteria. In subparagraphs (J) and (K), terms have the meanings given those terms under the Leadership in Energy and Environmental Design (LEED) standard for green building certification, as determined by the Administrator.

(e) Creation or retention of jobs

(1) A project meets the objective set forth in subsection (d)(1) of this section if the project creates or retains one job for every $50,000 guaranteed by the Administration, except that the amount is $100,000 in the case of a project of a small manufacturer.
(2) Paragraph (1) does not apply to a project for which eligibility is based on the objectives set forth in paragraph (2) or (3) of subsection (d) of this section, if the development company's portfolio of outstanding debentures creates or retains one job for every $50,000 guaranteed by the Administration.

(5) Under regulations prescribed by the Administrator, the Administrator may waive, on a case-by-case basis or by regulation, any requirement of this subsection (other than paragraph (4)). With respect to any waiver the Administrator is prohibited from adopting a dollar amount that is lower than the amounts set forth in paragraphs (1), (2), and (3).

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15 U.S.C.A. § 2901
Title 15. Commerce and Trade
Chapter 56. National Climate Program

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§ 2901. Findings

The Congress finds and declares the following:

(1) Weather and **climate change** affect food production, energy use, land use, water resources and other factors vital to national security and human welfare.
(2) An ability to anticipate natural and man-induced changes in climate would contribute to the soundness of policy decisions in the public and private sectors.
(3) Significant improvements in the ability to forecast climate on an intermediate and long-term basis are possible.
(4) Information regarding climate is not being fully disseminated or used, and Federal efforts have given insufficient attention to assessing and applying this information.

(5) Climate fluctuation and change occur on a global basis, and deficiencies exist in the system for monitoring global **climate changes**. International cooperation for the purpose of sharing the benefits and costs of a global effort to understand climate is essential.
(6) The United States lacks a well-defined and coordinated program in climate-related research, monitoring, assessment of effects, and information utilization.

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15 U.S.C.A. § 2901 Note

[The Global Climate Protection Act, Pub.L. 100-204, 101 Stat 1407 (Dec. 22, 1987), as amended Pub.L. 103-199, 107 Stat. 2327 (Dec. 17, 1993), is codified as a Note to 15 U.S.C.A. §2901.]

Sec. 1102. Findings.

The Congress finds as follows:

(1) There exists evidence that manmade pollution--the release of carbon dioxide, chlorofluorocarbons, methane, and other trace gases into the atmosphere--may be producing a long-term and substantial increase in the average temperature on Earth, a phenomenon known as **global warming** through the greenhouse effect.
(2) By early in the next century, an increase in Earth temperature could--
(A) so alter global weather patterns as to have an effect on existing agricultural production and on the habitability of large portions of the Earth; and
(B)cause thermal expansion of the oceans and partial melting of the polar ice caps and glaciers, resulting in rising sea levels.
(3) Important research into the problem of **climate change** is now being conducted by various United States Government and international agencies, and the continuation and intensification of those efforts will be crucial to the development of an effective United States response.
(4) While the consequences of the greenhouse effect may not be fully manifest until the next century, ongoing pollution and deforestation may be contributing now to an irreversible process. Necessary actions must be identified and implemented in time to protect the climate.
(5) The global nature of this problem will require vigorous efforts to achieve international cooperation aimed at minimizing and responding to adverse **climate change**; such international cooperation will be greatly enhanced by United States leadership. A key step in international cooperation will be the meeting of the Governing Council of the United Nations Environment Program, scheduled for June 1989, which will seek to determine a direction for worldwide efforts to control global **climate change**.
(6) Effective United States leadership in the international arena will depend upon a coordinated national policy.

Sec. 1103. Mandate for action on the global climate.

(a) Goals of United States Policy.--United States policy should seek to--

(1) increase worldwide understanding of the greenhouse effect and its environmental and health consequences;
(2) foster cooperation among nations to develop more extensive and coordinated scientific research efforts with respect to the greenhouse effect;
(3) identify technologies and activities to limit mankind's adverse effect on the global climate by--
(A) slowing the rate of increase of concentrations of **greenhouse gases** in the atmosphere in the near term; and
(B) stabilizing or reducing atmospheric concentrations of **greenhouse gases** over the long term; and
(4) work toward multilateral agreements.

(b) Formulation of United States Policy**.**--The President, through the Environmental Protection Agency, shall be responsible for developing and proposing to Congress a coordinated national policy on global **climate change.** Such policy formulation shall consider research findings of the Committee on Earth Sciences of the Federal Coordinating Council on Science and Engineering Technology, the National Academy of Sciences, the National Oceanic and Atmospheric Administration, the National Science Foundation, the National Aeronautic and Space Administration, the Department of Energy, the Environmental Protection Agency, and other organizations engaged in the conduct of

scientific research.

(c) Coordination of United States Policy in the International Arena.--The Secretary of State shall be responsible to coordinate those aspects of United States policy requiring action through the channels of multilateral diplomacy, including the United Nations Environment Program and other international organizations. In the formulation of these elements of United States policy, the Secretary of State shall, under the direction of the President, work jointly with the Administrator of the Environmental Protection Agency and other United States agencies concerned with environmental protection, consistent with applicable Federal law.

Sec. 1104. Report to Congress.

Not later than 24 months after the date of enactment of this Act [Dec. 22, 1987], the Secretary of State and the Administrator of the Environmental Protection Agency shall jointly submit to all committees of jurisdiction in the Congress a report which shall include--

(1) a summary analysis of current international scientific understanding of the greenhouse effect, including its environmental and health consequences;
(2) an assessment of United States efforts to gain international cooperation in limiting global **climate change**; and
(3) a description of the strategy by which the United States intends to seek further international cooperation to limit global **climate change.**

Sec. 1105. International Year of Global Climate Protection.

In order to focus international attention and concern on the problem of **global warming**, and to foster further work on multilateral treaties aimed at protecting the global climate, the Secretary of State shall undertake all necessary steps to promote, within the United Nations system, the early designation of an International Year of Global Climate Protection.

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15 U.S.C.A. § 2902

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§ 2902. Purpose

It is the purpose of the Congress in this chapter to establish a **national climate program** that will assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications.

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15 U.S.C.A. § 2904

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§ 2904. National Climate Program

(d) Program elements

The Program shall include, but not be limited to, the following elements:

(1)Assessments of the effect of climate on the natural environment, agricultural production, energy supply and demand, land and water resources, transportation, human health and national security Such assessments shall be conducted to the maximum extent possible by those Federal agencies having national programs in food, fiber, raw materials, energy, transportation, land and water management, and other such responsibilities, in accordance with existing laws and regulations. Where appropriate such assessments may include recommendations for action;
(2) basic and applied research to improve the understanding of climate processes, natural and man induced, and the social, economic, and political implications of **climate change**;
(3) methods for improving climate forecasts on a monthly, seasonal, yearly, and longer basis;

(4) global data collection, and monitoring and analysis activities to provide reliable, useful and readily available information on a continuing basis;
(5) systems for the management and active dissemination of climatological data, information and assessments, including mechanisms for consultation with current and potential users;

(6) measures for increasing international cooperation in climate research, monitoring, analysis and data dissemination;
(7) mechanisms for intergovernmental climate-related studies and services including participation by universities, the private sector and others concerned with applied research and advisory services. Such mechanisms may provide, among others, for the following State and regional services and functions: (A) studies relating to and analyses of climatic effects on agricultural production, water resources, energy needs, and other critical sectors of the economy; (B) atmospheric data collection and monitoring on a statewide and regional basis; (C) advice to regional, State, and local government agencies regarding climate-related issues; (D) information to users within the State regarding climate and climatic effects; and (E) information to the Secretary regarding the needs of persons within the States for climate-related services, information, and data. The Secretary may make annual grants to any State or group of States, which grants shall be made available to public or private educational institutions, to State agencies, and to other persons or institutions qualified to conduct climate-related studies or provide climate-related services;
(8) experimental climate forecast centers, which shall (A) be responsible for making and routinely updating experimental climate forecasts of a monthly, seasonal, annual, and longer nature, based on a variety of experimental techniques; (B) establish procedures to have forecasts reviewed and their accuracy evaluated; and (C) protect against premature reliance on such experimental forecasts; and
(9) a preliminary 5-year plan, to be submitted to the Congress for review and comment, not later than 180 days after September 17, 1978, and a final 5-year plan to be submitted to the Congress not later than 1 year after September 17, 1978, that shall be revised and extended at least once every four years. Each plan shall establish the goals and priorities for the Program, including the intergovernmental program described in paragraph (7), over the subsequent 5-year period, and shall contain details regarding (A) the role of Federal agencies in the programs, (B) Federal funding required to enable the Program to achieve such goals, and (C) Program accomplishments that must be achieved to ensure that Program goals are met within the time frame established by the plan.

[The President shall establish a National Climate Program in accordance with the provisions, findings and purposes of this chapter, promulgate 5-year plans, define the roles of Federal officers, provide for climate coordination, and establish a National Climate Program Office within the Department of Commerce.]

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15 U.S.C.A. § 2906

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§ 2906. Annual report

The Secretary shall prepare and submit to the President and the authorizing committees of the Congress, not later than March 31 of each year, a report on the activities conducted pursuant to this chapter during the preceding fiscal year, including--

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15 U.S.C.A. § 2921
Title 15. Commerce and Trade
Chapter 56a. Global change Research

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§ 2921. Definitions

As used in this chapter, the term--
(1) “Committee” means the Committee on Earth and Environmental Sciences established under section 2932 of this title;
(2) “Council” means the Federal Coordinating Council on Science, Engineering, and Technology;

(3) “**global change**” means changes in the global environment (including alterations in climate, land productivity, oceans or other water resources, atmospheric chemistry, and ecological systems) that may alter the capacity of the Earth to sustain life;
(4) “**global change** research” means study, monitoring, assessment, prediction, and information management activities to describe and understand--
(A) the interactive physical, chemical, and biological processes that regulate the total Earth system;
(B) the unique environment that the Earth provides for life;
(C) changes that are occurring in the Earth system; and
(D) the manner in which such system, environment, and changes are influenced by human actions;
(5) “Plan” means the National **Global change** Research Plan developed under section 2934 of this title, or any revision thereof; and
(6) “Program” means the United States **Global change** Research Program established under section 2933 of this

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15 U.S.C.A. § 2931
Title 15. Commerce and Trade
Chapter 56a. Global change Research
Subchapter I. United States Global change Research Program

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§ 2931. Findings and purpose

(a) Findings

The Congress makes the following findings:
(1) Industrial, agricultural, and other human activities, coupled with an expanding world population, are contributing to processes of **global change** that may significantly alter the Earth habitat within a few human generations.
(2) Such human-induced changes, in conjunction with natural fluctuations, may lead to significant **global warming** and thus alter world climate patterns and increase global sea levels. Over the next century, these consequences could adversely affect world agricultural and marine production, coastal habitability, biological diversity, human health, and global economic and social well-being.
(3) The release of chlorofluorocarbons and other stratospheric ozone-depleting substances is rapidly reducing the ability of the atmosphere to screen out harmful ultraviolet radiation, which could adversely affect human health and ecological systems.
(4) Development of effective policies to abate, mitigate, and cope with **global change** will rely on greatly improved scientific understanding of global environmental processes and on our ability to distinguish human-induced from natural **global change**.
(5) New developments in interdisciplinary Earth sciences, global observing systems, and computing technology make possible significant advances in the scientific understanding and prediction of these **global changes** and their effects.
(6) Although significant Federal **global change** research efforts are underway, an effective Federal research program will require efficient interagency coordination, and coordination with the research activities of State, private, and international entities.

(b) Purpose

The purpose of this subchapter is to provide for development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of **global change**.

15 U.S.C.A. § 2932

§ 2932. Committee on Earth and environmental sciences

(a) Establishment

The President, through the Council, shall establish a Committee on Earth and Environmental Sciences. The Committee shall carry out Council functions under section 6651 of Title 42 relating to **global change** research, for the purpose of increasing the overall effectiveness and productivity of Federal **global change** research efforts.

15 U.S.C.A. § 2933

§ 2933. United States Global change Research Program

The President shall establish an interagency United States **Global change** Research Program to improve understanding of **global change**. The Program shall be implemented by the Plan developed under section 2934 of this title.

15 U.S.C.A. § 2934

§ 2934. National Global change Research Plan

(a) In general

The Chairman of the Council, through the Committee, shall develop a National **Global change** Research Plan for implementation of the Program. The Plan shall contain recommendations for national **global change** research. The Chairman of the Council shall submit the Plan to the Congress within one year after November 16, 1990, and a revised Plan shall be submitted at least once every three years thereafter.

(b) Contents of Plan

The Plan shall--
(1) establish, for the 10-year period beginning in the year the Plan is submitted, the goals and priorities for Federal **global change** research which most effectively advance scientific understanding of **global change** and provide usable information on which to base policy decisions relating to **global change**;
(2) describe specific activities, including research activities, data collection and data analysis requirements, predictive modeling, participation in international research efforts, and information management, required to achieve such goals and priorities;
(3) identify and address, as appropriate, relevant programs and activities of the Federal agencies and departments represented on the Committee that contribute to the Program;
(4) set forth the role of each Federal agency and department in implementing the Plan;
(5) consider and utilize, as appropriate, reports and studies conducted by Federal agencies and departments, the National Research Council, or other entities;
(6) make recommendations for the coordination of the **global change** research activities of the United States with such activities of other nations and international organizations, including--
(A) a description of the extent and nature of necessary international cooperation;
(B) the development by the Committee, in consultation when appropriate with the National Space Council, of proposals for cooperation on major capital projects;
(C) bilateral and multilateral proposals for improving worldwide access to scientific data and information; and

(D) methods for improving participation in international **global change** research by developing nations; and
(7) estimate, to the extent practicable, Federal funding for **global change** research activities to be conducted under the Plan.

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15 U.S.C.A. § 2935

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§ 2935. Budget coordination

[Provisions regarding coordination between each Federal agency or department involved in **global change** research, the Committee on Earth and Environmental Science, and the President in submitting requests for appropriations for activities related to the **Global change** Research Program.]

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15 U.S.C.A. § 2936

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§ 2936. Scientific assessment

On a periodic basis (not less frequently than every 4 years), the Council, through the Committee, shall prepare and submit to the President and the Congress an assessment which--
(1) integrates, evaluates, and interprets the findings of the Program and discusses the scientific uncertainties associated with such findings;
(2) analyzes the effects of **global change** on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and
(3) analyzes current trends in **global change**, both human-inducted [FN1] and natural, and projects major trends for the subsequent 25 to 100 years.

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15 U.S.C.A. § 2938

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§ 2938. Relation to other authorities

(a) National Climate Program research activities

The President, the Chairman of the Council, and the Secretary of Commerce shall ensure that relevant research activities of the National Climate Program, established by the National Climate Program Act (15 U.S.C. 2901 et seq.), are considered in developing national **global change** research efforts.

(b) Availability of research findings

The President, the Chairman of the Council, and the heads of the agencies and departments represented on the Committee, shall ensure that the research findings of the Committee, and of Federal agencies and departments, are available to--
(1) the Environmental Protection Agency for use in the formulation of a coordinated national policy on global **climate change** pursuant to section 1103 of the Global Climate Protection Act of 1987 (15 U.S.C. 2901 note); and
(2) all Federal agencies and departments for use in the formulation of coordinated national policies for responding to human-induced and natural processes of **global change** pursuant to other statutory responsibilities and obligations.

(c) Effect on Federal response actions

Nothing in this subchapter shall be construed, interpreted, or applied to preclude or delay the planning or

implementation of any Federal action designed, in whole or in part, to address the threats of stratospheric ozone depletion or global **climate change**.

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15 U.S.C.A. § 2951
Title 15. Commerce and Trade
Chapter 56a. Global change Research
Subchapter II. International Cooperation in Global change Research

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§ 2951. Findings and purposes

(a) Findings

The Congress makes the following findings:
(1) Pooling of international resources and scientific capabilities will be essential to a successful international **global change** program.
(2) While international scientific planning is already underway, there is currently no comprehensive intergovernmental mechanism for planning, coordinating, or implementing research to understand **global change** and to mitigate possible adverse effects.
(3) An international **global change** research program will be important in building future consensus on methods for reducing global environmental degradation.
(4) The United States, as a world leader in environmental and Earth sciences, should help provide leadership in developing and implementing an international **global change** research program.

(b) Purposes

The purposes of this subchapter are to--
(1) promote international, intergovernmental cooperation on **global change** research;
(2) involve scientists and policymakers from developing nations in such cooperative **global change** research programs; and
(3) promote international efforts to provide technical and other assistance to developing nations which will facilitate improvements in their domestic standard of living while minimizing damage to the global or regional environment.

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15 U.S.C.A. § 2952

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§ 2952. International discussions

(a) **Global change** research

The President should direct the Secretary of State, in cooperation with the Committee, to initiate discussions with other nations leading toward international protocols and other agreements to coordinate **global change** research activities. Such discussions should include the following issues:
(1) Allocation of costs in **global change** research programs, especially with respect to major capital projects.
(2) Coordination of **global change** research plans with those developed by international organizations such as the International Council on Scientific Unions, the World Meteorological Organization, and the United Nations Environment Program.
(3) Establishment of **global change** research centers and training programs for scientists, especially those from developing nations.
(4) Development of innovative methods for management of international **global change** research, including--
(A) use of new or existing intergovernmental organizations for the coordination or funding of **global change** research; and
(B) creation of a limited foundation for **global change** research.

(5) The prompt establishment of international projects to--
(A) create globally accessible formats for data collected by various international sources; and
(B) combine and interpret data from various sources to produce information readily usable by policymakers attempting to formulate effective strategies for preventing, mitigating, and adapting to possible adverse effects of **global change**.
(6) Establishment of international offices to disseminate information useful in identifying, preventing, mitigating, or adapting to the possible effects of **global change**.

(b) Energy research

The President should direct the Secretary of State (in cooperation with the Secretary of Energy, the Secretary of Commerce, the United States Trade Representative, and other appropriate members of the Committee) to initiate discussions with other nations leading toward an international research protocol for cooperation on the development of energy technologies which have minimally adverse effects on the environment. Such discussions should include, but not be limited to, the following issues: . . . .

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15 U.S.C.A. § 2953

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§ 2953. Global change Research Information Office

Not more than 180 days after November 16, 1990, the President shall, in consultation with the Committee and all relevant Federal agencies, establish an Office of **Global change** Research Information. The purpose of the Office shall be to disseminate to foreign governments, businesses, and institutions, as well as the citizens of foreign countries, scientific research information available in the United States which would be useful in preventing, mitigating, or adapting to the effects of **global change**. Such information shall include, but need not be limited to, results of scientific research and development on technologies useful for—

(1) reducing energy consumption through conservation and energy efficiency;
(2) promoting the use of solar and renewable energy sources which reduce the amount of **greenhouse gases** released into the atmosphere;
(3) developing replacements for chlorofluorocarbons, halons, and other ozone-depleting substances which exhibit a significantly reduced potential for depleting stratospheric ozone;
(4) promoting the conservation of forest resources which help reduce the amount of carbon dioxide in the atmosphere;
(5) assisting developing countries in ecological pest management practices and in the proper use of agricultural, and industrial chemicals; and
(6) promoting recycling and source reduction of pollutants in order to reduce the volume of waste which must be disposed of, thus decreasing energy use and **greenhouse gas** emissions.

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16 U.S.C.A. § 1447d
Title 16. Conservation
Chapter 32a. Regional Marine Research Programs

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§ 1447d. Research grant program

(b) Research grants

(1) Each Board may annually submit a grant application to the Administrator of the National Oceanic and Atmospheric Administration to fund projects aimed at achieving the research priorities set forth in each research plan, including amendments thereto, developed and approved pursuant to section 1447c of this title.

(2) Projects eligible for funding under this section shall include research, investigations, studies, surveys, or demonstrations with respect to--

(K) assessment of the effects of **climate change** on marine resources in the region; and

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16 U.S.C.A. § 1451
Title 16. Conservation
Chapter 33. Coastal Zone Management

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§ 1451. Congressional findings

The Congress finds that:
(l) Because **global warming** may result in a substantial sea level rise with serious adverse effects in the coastal zone, coastal states must anticipate and plan for such an occurrence.

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16 USCA § 1601
Title 16. Conservation
Chapter 36. Forest and Rangeland Renewable Resources Planning
Subchapter I. Planning

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§ 1601. Renewable Resource Assessment

(a) Preparation by Secretary of Agriculture; time of preparation, updating and contents

In recognition of the vital importance of America's renewable resources of the forest, range, and other associated lands to the Nation's social and economic well-being, and of the necessity for a long term perspective in planning and undertaking related national renewable resource programs administered by the Forest Service, the Secretary of Agriculture shall prepare a Renewable Resource Assessment (hereinafter called the "Assessment"). The Assessment shall be prepared not later than December 31, 1975, and shall be updated during 1979 and each tenth year thereafter, and shall include but not be limited to--

(5) an analysis of the potential effects of global **climate change** on the condition of renewable resources on the forests and rangelands of the United States; and
(6) an analysis of the rural and urban forestry opportunities to mitigate the buildup of atmospheric carbon dioxide and reduce the risk of global **climate change**.

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16 U.S.C.A. § 1602

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§ 1602. Renewable Resource Program; preparation by Secretary of Agriculture and transmittal to President; purpose and development of program; time of preparation, updating and contents

(5) Program recommendations which—

(F) account for the effects of global **climate change** on forest and rangeland conditions, including potential effects on the geographic ranges of species, and on forest and rangeland products.

16 U.S.C.A. § 2105
Title 16. Conservation
Chapter 41. Cooperative Forestry Assistance

§ 2105. Urban and community forestry assistance

(a) Findings

The Congress finds that--
(1) the health of forests in urban areas and communities, including cities, their suburbs, and towns, in the United States is on the decline;

(4) urban trees are 15 times more effective than forest trees at reducing the buildup of carbon dioxide and aid in promoting energy conservation through mitigation of the heat island effect in urban areas;
(5) tree plantings and ground covers such as low growing dense perennial turfgrass sod in urban areas and communities can aid in reducing carbon dioxide emissions, mitigating the heat island effect, and reducing energy consumption, thus contributing to efforts to reduce **global warming** trends;

[It is the purpose of this chapter to authorize the Secretary of Agriculture, with respect to non-Federal forest lands in the United States, and forest lands in foreign countries, to assist in the coordination of policy, to encourage certain goals and to conduct other activities. The purposes of this section include improving understanding of the benefits of preserving and expanding tree cover in urban areas, encouraging the activities of private property owners, providing education programs and grant money and the like.]

16 U.S.C.A. § 2461
Title 16. Conservation
Chapter 44b. Antarctic Mineral Resources Protection

§ 2461. Findings and purpose

(a) Findings

Congress finds that--

(1) the Antarctic continent with its associated and dependent ecosystems is a distinctive environment providing a habitat for many unique species and offering a natural laboratory from which to monitor critical aspects of stratospheric ozone depletion and global **climate change**;

16 U.S.C.A. § 2621
Title 16. Conservation
Chapter 46. Public Utility Regulatory Policies
Subchapter II. Standards for Electric Utilities

§ 2621. Consideration and determination respecting certain ratemaking standards

(iv) Sources
Purchasers and other interested persons shall be provided annually with written information on the sources of the power provided by the utility, to the extent it can be determined, by type of generation, including **greenhouse gas**

emissions associated with each type of generation, for intervals during which such information is available on a cost-effective basis.

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16 U.S.C.A. § 4501
Title 16. Conservation
Chapter 65. International Forestry Cooperation

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§ 4501. Forestry and related natural resource assistance

(a) Focus of activities

To achieve the maximum impact from activities undertaken under the authority of this chapter, the Secretary shall focus such activities on the key countries which could have a substantial impact on emissions of **greenhouse gases** related to **global warming**.

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16 U.S.C.A. § 4503a

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§ 4503a. Institute of Pacific Islands Forestry

(b) Tropical forestry plan

(1) In general
Not later than 1 year after the date of receipt by the Secretary of the action plan required by section 5(b) of the Hawaii Tropical Forest Recovery Act, the Secretary shall prepare and submit to the Committee on Agriculture and the Committee on Natural Resources of the House of Representatives, the Committee on Agriculture, Nutrition, and Forestry of the Senate, and to the Committees on Appropriations of the House of Representatives and Senate, a tropical forestry plan to expand the capabilities of and construct additional facilities under subsection (a) of this section.
(2) Elements
The plan shall provide for--…

(E) achieving a better understanding of global **climate change** and the significance of achieving a reduction of **greenhouse gases** through research associated with the unique atmospheric conditions found in Hawaii and the Pacific Ocean;
(F) a review of the extent to which existing Federal forestry programs can be utilized to achieve the purposes of the plan; and
(G) the establishment of experimental tropical forests in the State of Hawaii as authorized by section 4503b of this title.

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20 U.S.C.A. § 5501
Title 20. Education
Chapter 65. National Environmental Education

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§ 5501. Findings and policy

(a) Findings

The Congress finds that--

(1) Threats to human health and environmental quality are increasingly complex, involving a wide range of conventional and toxic contaminants in the air and water and on the land.
(2) There is growing evidence of international environmental problems, such as **global warming**, ocean pollution, and declines in species diversity, and that these problems pose serious threats to human health and the environment on a global scale…

[This chapter pursues the policy of the United States to establish and support a program of education on the environment, for students and personnel working with students, through activities in schools, institutions of higher education, and related educational activities, and to encourage postsecondary students to pursue careers related to the environment.]

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22 U.S.C.A. § 2431
Title 22. Foreign Relations and Intercourse
Chapter 32. Foreign Assistance
Subchapter IV. Debt Reduction for Developing Countries with Tropical Forests

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§ 2431. Findings and purposes

(a) Findings

The Congress finds the following--

(1) It is the established policy of the United States to support and seek protection of tropical forests around the world.
(2) Tropical forests provide a wide range of benefits to humankind by--
(A) harboring a major share of the Earth's biological and terrestrial resources, which are the basis for developing pharmaceutical products and revitalizing agricultural crops;
(B) playing a critical role as carbon sinks in reducing **greenhouse gases** in the atmosphere, thus moderating potential global **climate change**; and…

[The purposes of this subchapter include protecting tropical forests through alleviation of debt to countries where tropical forests are located and re-channeling existing resources to facilitate protection of tropical forests.]

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22 U.S.C.A. § 7901
Title 22. Foreign Relations and Intercourse
Chapter 86. Climate change Technology Deployment in Developing Countries

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§ 7901. Definitions

In this part:

(1) Carbon sequestration
The term “carbon sequestration” means the capture of carbon dioxide through terrestrial, geological, biological, or other means, which prevents the release of carbon dioxide into the atmosphere.
(2) **Greenhouse gas**
The term “**greenhouse gas** ” means carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
(3) **Greenhouse gas** intensity
The term “**greenhouse gas** intensity” means the ratio of **greenhouse gas** emissions to economic output.

§ 7902. Reduction of greenhouse gas intensity

(a) Lead agency

(1) In general
The Department of State shall act as the lead agency for integrating into United States foreign policy the goal of reducing **greenhouse gas** intensity in developing countries.
(2) Reports
(A) Initial report
Not later than 180 days after August 8, 2005, the Secretary of State shall submit to the appropriate authorizing and appropriating committees of Congress an initial report, based on the most recent information available to the Secretary from reliable public sources, that identifies the 25 developing countries that are the largest **greenhouse gas** emitters, including for each country--
(i) an estimate of the quantity and types of energy used;
(ii) an estimate of the **greenhouse gas** intensity of the energy, manufacturing, agricultural, and transportation sectors;
(iii) a description the progress of any significant projects undertaken to reduce **greenhouse gas** intensity;
(iv) a description of the potential for undertaking projects to reduce **greenhouse gas** intensity;
(v) a description of any obstacles to the reduction of **greenhouse gas** intensity; and
(vi) a description of the best practices learned by the Agency for International Development from conducting previous pilot and demonstration projects to reduce **greenhouse gas** intensity.
(B) Update
Not later than 18 months after the date on which the initial report is submitted under subparagraph (A), the Secretary shall submit to the appropriate authorizing and appropriating committees of Congress, based on the best information available to the Secretary, an update of the information provided in the initial report.
(C) Use
(i) Initial report
The Secretary of State shall use the initial report submitted under subparagraph (A) to establish baselines for the developing countries identified in the report with respect to the information provided under clauses (i) and (ii) of that subparagraph.
(ii) Annual reports
The Secretary of State shall use the annual reports prepared under subparagraph (B) and any other information available to the Secretary to track the progress of the developing countries with respect to reducing **greenhouse gas** intensity.

(b) Projects

The Secretary of State, in coordination with Administrator of the United States Agency for International Development, shall (directly or through agreements with the World Bank, the International Monetary Fund, the Overseas Private Investment Corporation, and other development institutions) provide assistance to developing countries specifically for projects to reduce **greenhouse gas** intensity, including projects to—

(1) leverage, through bilateral agreements, funds for reduction of **greenhouse gas** intensity;
(2) increase private investment in projects and activities to reduce **greenhouse gas** intensity; and
(3) expedite the deployment of technology to reduce **greenhouse gas** intensity.

22 U.S.C.A. § 7903

§ 7903. Technology inventory for developing countries

(a) In general

The Secretary of Energy, in coordination with the Secretary of State and the Secretary of Commerce, shall conduct an inventory of **greenhouse gas** intensity reducing technologies that are developed, or under development in the United States, to identify technologies that are suitable for transfer to, deployment in, and commercialization in the developing countries identified in the report submitted under section 7902(a)(2)(A) of this title.

22 U.S.C.A. § 7904

§ 7904. Trade-related barriers to export of greenhouse gas intensity reducing technologies

(a) In general

Not later than 1 year after August 8, 2005, the United States Trade Representative shall (as appropriate and consistent with applicable bilateral, regional, and mutual trade agreements)--
(1) identify trade-relations barriers maintained by foreign countries to the export of **greenhouse gas** intensity reducing technologies and practices from the United States to the developing countries identified in the report submitted under section 7902(a)(2)(A) of this title; and
(2) negotiate with foreign countries for the removal of those barriers.

22 U.S.C.A. § 7905

§ 7905. Greenhouse gas Intensity Reducing Technology Export Initiative

(a) In general

There is established an interagency working group to carry out a **Greenhouse gas** Intensity Reducing Technology Export Initiative to--

(1) promote the export of **greenhouse gas** intensity reducing technologies and practices from the United States;
(2) identify developing countries that should be designated as priority countries for the purpose of exporting **greenhouse gas** intensity reducing technologies and practices, based on the report submitted under section 7902(a)(2)(A) of this title;
(3) identify potential barriers to adoption of exported **greenhouse gas** intensity reducing technologies and practices based on the reports submitted under section 7904 of this title; and
(4) identify previous efforts to export energy technologies to learn best practices.

(b) Composition

The working group shall be composed of--
(1) the Secretary of State, who shall act as the head of the working group;
(2) the Administrator of the United States Agency for International Development;
(3) the United States Trade Representative;
(4) a designee of the Secretary of Energy;
(5) a designee of the Secretary of Commerce; and
(6) a designee of the Administrator of the Environmental Protection Agency.

(c) Performance reviews and reports

Not later than 180 days after August 8, 2005 and each year thereafter, the interagency working group shall--
(1) conduct a performance review of actions taken and results achieved by the Federal Government (including each of the agencies represented on the interagency working group) to promote the export of **greenhouse gas** intensity reducing technologies and practices from the United States; and
(2) submit to the appropriate authorizing and appropriating committees of Congress a report that describes the results of the performance reviews and evaluates progress in promoting the export of **greenhouse gas** intensity reducing technologies and practices from the United States, including any recommendations for increasing the export of the technologies and practices.

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22 U.S.C.A. § 7906

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§ 7906. Technology demonstration projects

(a) In general

The Secretary of State, in coordination with the Secretary of Energy and the Administrator of the United States Agency for International Development, shall promote the adoption of technologies and practices that reduce **greenhouse gas** intensity in developing countries in accordance with this section.

(b) Demonstration projects

(3) Selection
In determining which eligible countries to provide assistance to under paragraph (1), the Secretaries and the Administrator shall consider--
(A) the opportunity to reduce **greenhouse gas** intensity in the eligible country; and
(B) the opportunity to generate economic growth in the eligible country.

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22 U.S.C.A. § 7907

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§ 7907. Fellowship and exchange programs

The Secretary of State, in coordination with the Secretary of Energy, the Secretary of Commerce, and the Administrator of the Environmental Protection Agency, shall carry out fellowship and exchange programs under which officials from developing countries visit the United States to acquire expertise and knowledge of best practices to reduce **greenhouse gas** intensity in their countries.

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25 U.S.C.A. § 3501
Title 25. Indians
Chapter 37. Indian Energy

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§ 3501. Definitions

(10) The term “sequestration” means the long-term separation, isolation, or removal of **greenhouse gas** from the atmosphere, including through a biological or geologic method such as reforestation or an underground reservoir.

25 U.S.C.A. § 3502

§ 3502. Indian tribal energy resource development

(b) Department of Energy Indian Energy Education Planning and Management Assistance Program

(3)(A) The Director shall develop a program to support and implement research projects that provide Indian tribes with opportunities to participate in carbon sequestration practices on Indian land, including--
(i) geologic sequestration;
(ii) forest sequestration;
(iii) agricultural sequestration; and
(iv) any other sequestration opportunities the Director considers to be appropriate.

(B) The activities carried out under subparagraph (A) shall be--
(i) coordinated with other carbon sequestration research and development programs conducted by the Secretary of Energy;
(ii) conducted to determine methods consistent with existing standardized measurement protocols to account and report the quantity of carbon dioxide or other **greenhouse gases** sequestered in projects that may be implemented on Indian land; and
(iii) reviewed periodically to collect and distribute to Indian tribes information on carbon sequestration practices that will increase the sequestration of carbon without threatening the social and economic well-being of Indian tribes.

26 U.S.C.A. § 48A
I.R.C. § 48A
Title 26. Internal Revenue Code
Subtitle A. Income Taxes
Chapter I. Normal Taxes and Surtaxes
Subchapter A. Determination of Tax Liability
Part IV. Credits Against Tax
Subpart E. Rules for Computing Investment Credit

§ 48A. Qualifying advanced coal project credit

(c) Definitions.--For purposes of this section--

(1) Qualifying advanced coal project.--The term "qualifying advanced coal project" means a project which meets the requirements of subsection (e).
(2) Advanced coal-based generation technology.--The term "advanced coal-based generation technology" means a technology which meets the requirements of subsection (f).
(3) Eligible property.--The term "eligible property" means--
(A) in the case of any qualifying advanced coal project using an integrated gasification combined cycle, any property which is a part of such project and is necessary for the gasification of coal, including any coal handling and gas separation equipment, and
(B) in the case of any other qualifying advanced coal project, any property which is a part of such project.
(4) Coal.--The term "coal" means anthracite, bituminous coal, subbituminous coal, lignite, and peat.
(5) **Greenhouse gas** capture capability.--The term "**greenhouse gas** capture capability" means an integrated gasification combined cycle technology facility capable of adding components which can capture, separate on a long-term basis, isolate, remove, and sequester **greenhouse gases** which result from the generation of electricity.

(e) Qualifying advanced coal projects.—

(3) Priority for integrated gasification combined cycle projects.--In determining which qualifying advanced coal projects to certify under subsection (d)(2), the Secretary shall--

(B) give high priority to projects which include, as determined by the Secretary--
(i) **greenhouse gas** capture capability,
(ii) increased by-product utilization, and
(iii) other benefits.

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29 U.S.C.A. § 2916
Title 29. Labor
Chapter 30. Workforce Investment Systems
Subchapter IV. National Programs

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§ 2916. Demonstration, pilot, multiservice, research, and multistate projects

(e) Energy efficiency and renewable energy worker training program

(2) Activities

(D) State energy training partnership program
(i) In general
Under the program established under paragraph (1), the Secretary shall award competitive grants to States to enable such States to administer renewable energy and energy efficiency workforce development programs that include the implementation of the activities described in clause (ii).

(iv) Priority
In awarding grants under this subparagraph, the Secretary shall give priority to States that demonstrate that activities under the grant--
(I) meet national energy policies associated with energy efficiency, renewable energy, and the reduction of emissions of **greenhouse gases**;
(II) meet State energy policies associated with energy efficiency, renewable energy, and the reduction of emissions of **greenhouse gases**;

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42 U.S.C.A. § 6342
Title 42. The Public Health and Welfare
Chapter 77. Energy Conservation
Subchapter III. Improving Energy Efficiency
Part C. Industrial Energy Efficiency

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§ 6342. Survey and registry

(d) Registry

(2) Contents

(B) Quantity of recoverable waste energy
The Administrator shall--
(i) calculate the total quantities of potentially recoverable waste energy from sources at the sites, nationally and by State; and
(ii) make public--

(I) the total quantities described in clause (i); and
(II) information on the criteria pollutant and **greenhouse gas** emissions savings that might be achieved with recovery of the waste energy from all sources and sites listed on the Registry.

[Under this Part the Administrator of the EPA, in cooperation with the Secretary of Energy and State energy offices, shall establish a recoverable waste energy inventory program. The program includes an ongoing survey of all major industrial and large commercial combustion sources in the United States (as defined by the Administrator) and the sites at which the sources are located; and a review of each source for the quantity and quality of waste energy produced at the source. Technical assistance an incentive grants are provided.]

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42 U.S.C.A. § 6371h-1
Title 42. The Public Health and Welfare
Chapter 77. Energy Conservation
Subchapter III. Improving Energy Efficiency
Part E. Energy Conservation Program for Schools and Hospitals

§ 6371h-1. Energy sustainability and efficiency grants and loans for institutions

(c) Grants for energy efficiency improvement and energy sustainability

(2) Criteria
Evaluation of projects for grant funding shall be based on criteria established by the Secretary, including criteria relating to--
(A) improvement in energy efficiency;
(B) reduction in **greenhouse gas** emissions and other air emissions, including criteria air pollutants and ozone-depleting refrigerants;

(g) Loans for energy efficiency improvement and energy sustainability

(3) Criteria
Evaluation of projects for potential loan funding shall be based on criteria established by the Secretary, including criteria relating to--
(A) improvement in energy efficiency;
(B) reduction in **greenhouse gas** emissions and other air emissions, including criteria air pollutants and ozone-depleting refrigerants;

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42 U.S.C.A. § 7545
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control
Subchapter II. Emission Standards for Moving Sources
Part A. Motor Vehicle Emission and Fuel Standards

§ 7545. Regulation of fuels

<Pub.L. 110-140, Title II, §§ 201, 210(c), Dec. 19, 2007, 121 Stat.1519, 1532, provided that, **effective January 1, 2009**, subsection (o)(1) is amended to read as follows:>
<(1) Definitions>
<In this section:>
<(A) Additional renewable fuel>
<The term “additional renewable fuel” means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in home heating oil or jet fuel.>

<(B) Advanced biofuel>
<(i) In general>
<The term “advanced biofuel” means renewable fuel, other than ethanol derived from corn starch, that has lifecycle **greenhouse gas** emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than baseline lifecycle **greenhouse gas** emissions.>

<(C) Baseline lifecycle **greenhouse gas** emissions>
<The term “baseline lifecycle **greenhouse gas** emissions” means the average lifecycle **greenhouse gas** emissions, as determined by the Administrator, after notice and opportunity for comment, for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.>
<(D) Biomass-based diesel>
<The term “biomass-based diesel” means renewable fuel that is biodiesel as defined in section 13220(f) of this title and that has lifecycle **greenhouse gas** emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than the baseline lifecycle **greenhouse gas** emissions. Notwithstanding the preceding sentence, renewable fuel derived from co-processing biomass with a petroleum feedstock shall be advanced biofuel if it meets the requirements of subparagraph (B), but is not biomass-based diesel.>
<(E) Cellulosic biofuel>
<The term “cellulosic biofuel” means renewable fuel derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass and that has lifecycle **greenhouse gas** emissions, as determined by the Administrator, that are at least 60 percent less than the baseline lifecycle **greenhouse gas** emissions.>
<(F) Conventional biofuel>
<The term “conventional biofuel” means renewable fuel that is ethanol derived from corn starch.>
<(G) **Greenhouse gas** >
<The term “**greenhouse gas** ” means carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons, sulfur hexafluoride. The Administrator may include any other anthropogenically-emitted gas that is determined by the Administrator, after notice and comment, to contribute to **global warming**.>
<(H) Lifecycle **greenhouse gas** emissions>
<The term “lifecycle **greenhouse gas** emissions” means the aggregate quantity of **greenhouse gas** emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator, related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer, where the mass values for all **greenhouse gases** are adjusted to account for their relative **global warming** potential.>

[It is the purpose of this chapter subsection(o) to set forth the regulations, provisions, and elements associated with the Renewable Fuel Program. The program which mandates that no later than 1 year after August 8, 2005, the Administrator shall promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States, on an annual average basis, contains the applicable volume of renewable fuel determined in accordance with subparagraph (B).]

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42 U.S.C.A. § 7671a
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control
Subchapter VI. Stratospheric Ozone Protection

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§ 7671a. Listing of class I and class II substances

(e) Ozone-depletion and **greenhouse gas** potential
Simultaneously with publication of the lists under this section and simultaneously with any addition to either of such lists, the Administrator shall assign to each listed substance a numerical value representing the substance's ozone-depletion potential. In addition, the Administrator shall publish the chlorine and bromine loading potential and the atmospheric lifetime of each listed substance. One year after November 15, 1990 (one year after the addition of a substance to either of such lists in the case of a substance added after the publication of the initial lists of such

substances), and after notice and opportunity for public comment, the Administrator shall publish the **greenhouse gas** potential of each listed substance. The preceding sentence shall not be construed to be the basis of any additional regulation under this chapter. In the case of the substances referred to in table 1, the ozone-depletion potential shall be as specified in table 1, unless the Administrator adjusts the substance's ozone-depletion potential based on criteria referred to in section 7671(10) of this title:

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42 U.S.C.A. § 8258a
Title 42. The Public Health and Welfare
Chapter 91. National Energy Conservation Policy
Subchapter III. Federal Energy Initiative
Part B. Federal Energy Management

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§ 8258a. Demonstration of new technology

(a) Demonstration program

Not later than January 1, 1994, the Secretary, in cooperation with the Administrator of General Services, shall establish a demonstration program to install, in federally owned facilities or federally assisted housing, energy conservation measures for which the Secretary has determined that such installation would accelerate commercial viability. In those cases where technologies are determined to be equivalent, priority shall be given to those technologies that have received or are receiving Federal financial assistance.

(b) Selection criteria

In addition to the determination under subsection (a) of this section, the Secretary shall select, in cooperation with the Administrator of General Services, proposals to be funded under this section on the basis of—

(7) other environmental benefits, including the projected reduction of **greenhouse gas** emissions and indoor air pollution.

[The proposals referred to in this provision refer to proposals for projects that may be submitted to the Secretary by Federal Agencies to be funded by the Secretary under this section. The proposed projects must emphasize the innovative use of technology in the Federal sector, and the technology must be cost-effective and conserve energy.]

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42 U.S.C.A. § 13212
Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter I. Alternative Fuels—General

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§ 13212. Minimum Federal fleet requirement

(a) Vehicle emission requirements

(2) Prohibition
(A) In general
Except as provided in subparagraph (B), no Federal agency shall acquire a light duty motor vehicle or medium duty passenger vehicle that is not a low **greenhouse gas** emitting vehicle.
(B) Exception
The prohibition in subparagraph (A) shall not apply to acquisition of a vehicle if the head of the agency certifies in writing, in a separate certification for each individual vehicle purchased, either--

(i) that no low **greenhouse gas** emitting vehicle is available to meet the functional needs of the agency and details in writing the functional needs that could not be met with a low **greenhouse gas** emitting vehicle; or
(ii) that the agency has taken specific alternative more cost-effective measures to reduce petroleum consumption that--
(I) have reduced a measured and verified quantity of **greenhouse gas** emissions equal to or greater than the quantity of **greenhouse gas** reductions that would have been achieved through acquisition of a low **greenhouse gas** emitting vehicle over the lifetime of the vehicle; or
(II) will reduce each year a measured and verified quantity of **greenhouse gas** emissions equal to or greater than the quantity of **greenhouse gas** reductions that would have been achieved each year through acquisition of a low **greenhouse gas** emitting vehicle.

(3) Guidance
(A) In general
Each year, the Administrator of the Environmental Protection Agency shall issue guidance identifying the makes and model numbers of vehicles that are low **greenhouse gas** emitting vehicles.
(B) Consideration
In identifying vehicles under subparagraph (A), the Administrator shall take into account the most stringent standards for vehicle **greenhouse gas** emissions applicable to and enforceable against motor vehicle manufacturers for vehicles sold anywhere in the United States.
(C) Requirement
The Administrator shall not identify any vehicle as a low **greenhouse gas** emitting vehicle if the vehicle emits **greenhouse gases** at a higher rate than such standards allow for the manufacturer's fleet average grams per mile of carbon dioxide-equivalent emissions for that class of vehicle, taking into account any emissions allowances and adjustment factors such standards provide.

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42 U.S.C.A. § 13252
Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter III. Availability and Use of Replacement Fuels, Alternative Fuels, and Alternative Fueled Private Vehicles

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§ 13252. Replacement fuel supply and demand program

(a) Establishment of program

The Secretary shall establish a program to promote the development and use in light duty motor vehicles of domestic replacement fuels. Such program shall promote the replacement of petroleum motor fuels with replacement fuels to the maximum extent practicable. Such program shall, to the extent practicable, ensure the availability of those replacement fuels that will have the greatest impact in reducing oil imports, improving the health of our Nation's economy and reducing **greenhouse gas** emissions.

(b) Development plan and production goals

(5) determine the **greenhouse gas** emission implications of increasing the use of replacement fuels, including an estimate of the maximum feasible reduction in such emissions from the use of replacement fuels.

42 U.S.C.A. § 13253

§ 13253. Replacement fuel demand estimates and supply information

(a) Estimates

Not later than October 1, 1993, and annually thereafter, the Secretary, in consultation with the Administrator, the Secretary of Transportation, and other appropriate State and Federal officials, shall estimate for the following calendar year--
(1) the number of each type of alternative fueled vehicle likely to be in use in the United States;
(2) the probable geographic distribution of such vehicles;
(3) the amount and distribution of each type of replacement fuel; and
(4) the **greenhouse gas** emissions likely to result from replacement fuel use.

(b) Information

Beginning on October 1, 1994, the Secretary shall annually require--

(3) such fuel suppliers to provide the Secretary information necessary to determine the **greenhouse gas** emissions from the replacement fuels used, taking into account the entire fuel cycle.

42 U.S.C.A. § 13257

§ 13257. Fleet requirement program

(l) Consideration of factors

In carrying out this section, the Secretary shall take into consideration energy security, costs, safety, lead time requirements, vehicle miles traveled annually, effect on **greenhouse gas**, technological feasibility, energy requirements, economic impacts, including impacts on workers and the impact on consumers (including users of the alternative fuel for purposes such as for residences, agriculture, process use, and non-fuel purposes) and fleets, the availability of alternative fuels and alternative fueled vehicles, and other relevant factors.

[The fleet requirement program sets purchase goals which mandate that a certain percentage of new light duty motor vehicles acquired in each model year, beginning with 1999, for a fleet, other than a Federal fleet, State fleet, or fleet owned, operated, leased, or otherwise controlled by a covered person subject to section 13251 of this title, shall be alternative fueled vehicles.]

42 U.S.C.A. § 13315
Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter V. Renewable Energy

§ 13315. Data system and energy technology evaluation

The Secretary of Commerce, in his or her role as a member of the interagency working group established under section 6276 of this title, shall--

(3) prepare and transmit to the Congress not later than June 1, 1993, and biennially thereafter, a comprehensive report evaluating the full range of energy and environmental technologies necessary to

(D) an evaluation of current programs (and recommendations for future programs) that develop and promote energy efficiency and sustainable use of indigenous renewable energy resources in foreign countries to reduce the generation of **greenhouse gas**.

[This provisions mandates that the Secretary of Commerce shall develop a data base and information dissemination system that will provide information on the specific energy technology needs of foreign countries and the technical and economic competitiveness of various renewable energy and energy efficiency products and technologies that can meet the energy needs of foreign countries.]

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42 U.S.C.A. § 13331
Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter VI. Coal
Part A. Research, Development, Demonstration, and Commercial Application

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§ 13331. Coal research, development, demonstration, and commercial application programs

(a) Establishment

The Secretary shall, in accordance with section [FN1] 13541 and 13542 of this title, conduct programs for research, development, demonstration, and commercial application on coal-based technologies. Such research, development, demonstration, and commercial application programs shall include the programs established under this part, and shall have the goals and objectives of--

(3) achieving the control of sulfur oxides, oxides of nitrogen, air toxics, solid and liquid wastes, **greenhouse gas**, or other emissions resulting from coal use or conversion at levels of proficiency greater than or equal to applicable currently available commercial technology;

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42 U.S.C.A. § 13381
Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter VII. Global Climate change

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§ 13381. Report

Not later than 2 years after October 24, 1992, the Secretary shall submit a report to the Congress that includes an assessment of--

(1) the feasibility and economic, energy, social, environmental, and competitive implications, including implications for jobs, of stabilizing the generation of **greenhouse gas** in the United States by the year 2005;

(4) the feasibility of reducing the generation of **greenhouse gas;**

(6) the potential economic, energy, social, environmental, and competitive implications, including implications for jobs, of implementing the policies necessary to enable the United States to comply with any obligations under the United Nations Framework Convention on **Climate change** or subsequent international agreements.

42 U.S.C.A. § 13382

§ 13382. Least-cost energy strategy

(a) Strategy

The first National Energy Policy Plan (in this subchapter referred to as the "Plan") under section 7321 of this title prepared and required to be submitted by the President to Congress after February 1, 1993, and each subsequent such Plan, shall include a least-cost energy strategy prepared by the Secretary. In developing the least-cost energy strategy, the Secretary shall take into consideration the economic, energy, social, environmental, and competitive costs and benefits, including costs and benefits for jobs, of his choices. Such strategy shall also take into account the report required under section 13381 of this title and relevant Federal, State, and local requirements. Such strategy shall be designed to achieve to the maximum extent practicable and at least-cost to the Nation--

(1) the energy production, utilization, and energy conservation priorities of subsection (d) of this section;
(2) the stabilization and eventual reduction in the generation of **greenhouse gas**;
(3) an increase in the efficiency of the Nation's total energy use by 30 percent over 1988 levels by the year 2010;
(4) an increase in the percentage of energy derived from renewable resources by 75 percent over 1988 levels by the year 2005; and
(5) a reduction in the Nation's oil consumption from the 1990 level of approximately 40 percent of total energy use to 35 percent by the year 2005.

d) Priorities

The least-cost energy strategy shall identify Federal priorities, including policies that—

(1) implement standards for more efficient use of fossil fuels;
(2) increase the energy efficiency of existing technologies;
(3) encourage technologies, including clean coal technologies, that generate lower levels of **greenhouse gases**;
(4) promote the use of renewable energy resources, including solar, geothermal, sustainable biomass, hydropower, and wind power;
(5) affect the development and consumption of energy and energy efficiency resources and electricity through tax policy;
(6) encourage investment in energy efficient equipment and technologies; and
(7) encourage the development of energy technologies, such as advanced nuclear fission and nuclear fusion, that produce energy without **greenhouse gases** as a byproduct, and encourage the deployment of nuclear electric generating capacity.

42 U.S.C.A. § 13383

§ 13383. Director of Climate Protection

Within 6 months after October 24, 1992, the Secretary shall establish, within the Department of Energy, a Director of Climate Protection (in this section referred to as the "Director"). The Director shall--
(1) in the absence of the Secretary, serve as the Secretary's representative for interagency and multilateral policy discussions of global **climate change**, including the activities of the Committee on Earth and Environmental Sciences as established by the **Global change** Research Act of 1990 (Public Law 101-606) [15 U.S.C.A. § 2921 et seq.] and the Policy Coordinating Committee Working Group on **Climate change**;
(2) monitor, in cooperation with other Federal agencies, domestic and international policies for their effects on the generation of **greenhouse gas**es; and
(3) have the authority to participate in the planning activities of relevant Department of Energy programs.

42 U.S.C.A. § 13384

§ 13384. Assessment of alternative policy mechanisms for addressing greenhouse gas emissions

Not later than 18 months after October 24, 1992, the Secretary shall transmit a report to Congress containing a comparative assessment of alternative policy mechanisms for reducing the generation of **greenhouse gases**. Such assessment shall include a short-run and long-run analysis of the social, economic, energy, environmental, competitive, and agricultural costs and benefits, including costs and benefits for jobs and competition, and the practicality of each of the following policy mechanisms:
(1) Various systems for controlling the generation of **greenhouse gases**, including caps for the generation of **greenhouse gases** from major sources and emissions trading programs.
(2) Federal standards for energy efficiency for major sources of **greenhouse gases**, including efficiency standards for power plants, industrial processes, automobile fuel economy, appliances, and buildings, and for emissions of methane.
(3) Various Federal and voluntary incentives programs.

42 U.S.C.A. § 13385

§ 13385. National inventory and voluntary reporting of greenhouse gases

(a) National inventory

Not later than one year after October 24, 1992, the Secretary, through the Energy Information Administration, shall develop, based on data available to, and obtained by, the Energy Information Administration, an inventory of the national aggregate emissions of each **greenhouse gas** for each calendar year of the baseline period of 1987 through 1990. The Administrator of the Energy Information Administration shall annually update and analyze such inventory using available data. This subsection does not provide any new data collection authority.

(b) Voluntary reporting

(1) Issuance of guidelines
Not later than 18 months after October 24, 1992, the Secretary shall, after opportunity for public comment, issue guidelines for the voluntary collection and reporting of information on sources of **greenhouse gases**. Such guidelines shall establish procedures for the accurate voluntary reporting of information on--
(A) **greenhouse gas** emissions--
(i) for the baseline period of 1987 through 1990; and
(ii) for subsequent calendar years on an annual basis;
(B) annual reductions of **greenhouse gas** emissions and carbon fixation achieved through any measures, including fuel switching, forest management practices, tree planting, use of renewable energy, manufacture or use of vehicles with reduced **greenhouse gas** emissions, appliance efficiency, energy efficiency, methane recovery, cogeneration, chlorofluorocarbon capture and replacement, and power plant heat rate improvement;
(C) reductions in **greenhouse gas** emissions achieved as a result of--
(i) voluntary reductions;
(ii) plant or facility closings; and
(iii) State or Federal requirements; and
(D) an aggregate calculation of **greenhouse gas** emissions by each reporting entity.
Such guidelines shall also establish procedures for taking into account the differential radiative activity and atmospheric lifetimes of each **greenhouse gas**.

(4) Establishment of data base

Not later than 18 months after October 24, 1992, the Secretary, through the Administrator of the Energy Information Administration, shall establish a data base comprised of information voluntarily reported under this subsection. Such information may be used by the reporting entity to demonstrate achieved reductions of **greenhouse gases**.

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42 U.S.C.A. § 13387

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§ 13387. Innovative environmental technology transfer program

(b) Purposes of program

The purposes of the technology transfer program under this section are to--
(1) reduce the United States balance of trade deficit through the export of United States energy technologies and technological expertise;
(2) retain and create manufacturing and related service jobs in the United States;
(3) encourage the export of United States technologies, including services related thereto, to those countries that have a need for developmentally sound facilities to provide energy derived from technologies that substantially reduce environmental pollutants, including **greenhouse gases**;
(4) develop markets for United States technologies, including services related thereto, that substantially reduce environmental pollutants, including **greenhouse gases**, that meet the energy and environmental requirements of foreign countries;
(5) better ensure that United States participation in energy-related projects in foreign countries includes participation by United States firms as well as utilization of United States technologies;
(6) ensure the introduction of United States firms and expertise in foreign countries;
(7) provide financial assistance by the Federal Government to foster greater participation by United States firms in the financing, ownership, design, construction, or operation of technologies or services that substantially reduce environmental pollutants, including **greenhouse gases**; and
(8) assist United States firms, especially firms that are in competition with firms in foreign countries, to obtain opportunities to transfer technologies to, or undertake projects in, foreign countries.

(c) Identification

Pursuant to the agreements required by subsection (a) of this section, the Secretary, through the Agency for International Development, and after consultation with the interagency working group, United States firms, and representatives from foreign countries, shall develop mechanisms to identify potential energy projects in host countries that substantially reduce environmental pollutants, including **greenhouse gases**, and shall identify a list of such projects within 240 days after October 24, 1992, and periodically thereafter.

(d) Financial mechanisms

(1) Pursuant to the agreements under subsection (a) of this section, the Secretary, through the Agency for International Development, shall--
(A) establish appropriate financial mechanisms to increase the participation of United States firms in energy projects, and services related thereto, that substantially reduce environmental pollutants, including **greenhouse gases** in foreign countries;

(e) Solicitations for project proposals

(3) Any solicitation made under this subsection shall include the following requirements:

(B) The project shall utilize a United States technology, including services related thereto, that substantially reduce environmental pollutants, including **greenhouse gases**, in meeting the applicable energy and environmental requirements of the host country.

(i) Selection of projects

(3) In selecting among proposed projects, the Secretary shall seek to ensure that, relative to otherwise comparable projects in the host country, a selected project will meet the following criteria:
(A) It will reduce environmental emissions, including **greenhouse gases**, to an extent greater than required by applicable provisions of law.

(*l*) Report to Congress

The Secretary and the Administrator of the Agency for International Development shall report annually to the Committee on Energy and Natural Resources of the Senate and the appropriate committees of the House of Representatives on the progress being made to introduce innovative energy technologies, and services related thereto, that substantially reduce environmental pollutants, including **greenhouse gases**, into foreign countries.

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42 U.S.C.A. § 13388

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§ 13388. Global Climate change Response Fund

(a) Establishment of the Fund

The Secretary of the Treasury, in consultation with the Secretary of State, shall establish a Global **Climate change** Response Fund to act as a mechanism for United States contributions to assist global efforts in mitigating and adapting to global **climate change**.

(b) Restrictions on deposits

No deposits shall be made to the Global **Climate change** Response Fund until the United States has ratified the United Nations Framework Convention on **Climate change**.

(c) Use of Fund

Moneys deposited into the Fund shall be used by the President, to the extent authorized and appropriated under section 2222 of Title 22, solely for contributions to a financial mechanism negotiated pursuant to the United Nations Framework Convention on **Climate change**, including all protocols or agreements related thereto.

(d) Authorization of appropriations

There are authorized to be appropriated for deposit in the Fund to carry out the purposes of this section, $50,000,000 for fiscal year 1994 and such sums as may be necessary for fiscal years 1995 and 1996.

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42 U.S.C.A. § 13389

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§ 13389. Greenhouse gas intensity reducing strategies

(a) Definitions

In this section:

(1) Advisory Committee
The term “Advisory Committee” means the **Climate change** Technology Advisory Committee established under subsection (f)(1) of this section.

(2) Carbon sequestration
The term “carbon sequestration” means the capture of carbon dioxide through terrestrial, geological, biological, or other means, which prevents the release of carbon dioxide into the atmosphere.
(3) Committee
The term “Committee” means the Committee on **Climate change** Technology established under subsection (b)(1) of this section.

(5) **Greenhouse gas**
The term “**greenhouse gas** ” means-- (A) carbon dioxide; (B) methane; (C) nitrous oxide; (D) hydrofluorocarbons; (E) perfluorocarbons; and (F) sulfur hexafluoride.
(6) **Greenhouse gas** intensity
The term “**greenhouse gas** intensity” means the ratio of **greenhouse gas** emissions to economic output.
(7) National Laboratory
The term “National Laboratory” has the meaning given the term in section 15801(3) of this title.

(b) Committee on **Climate change** Technology

(1) In general
Not later than 180 days after August 8, 2005, the President shall establish a Committee on **Climate change** Technology to--
(A) integrate current Federal climate reports; and
(B) coordinate Federal **climate change** technology activities and programs carried out in furtherance of the strategy developed under subsection (c)(1) of this section.

(c) National **climate change** technology policy

(1) In general
Not later than 18 months after August 8, 2005, the Committee shall, based on applicable Federal climate reports, submit to the Secretary and the President a national strategy to promote the deployment and commercialization of **greenhouse gas** intensity reducing technologies and practices developed through research and development programs conducted by the National Laboratories, other Federal research facilities, institutions of higher education, and the private sector.

(d) **Climate change** technology program

Not later than 180 days after the date on which the Committee is established under subsection (b)(1) of this section, the Secretary, in consultation with the Committee, shall establish within the Department of Energy the **Climate change** Technology Program to--
(1) assist the Committee in the interagency coordination of **climate change** technology research, development, demonstration, and deployment to reduce **greenhouse gas** intensity; and
(2) carry out the programs authorized under this section.

(e) Technology inventory

(1) In general
The Secretary shall conduct and make public an inventory and evaluation of **greenhouse gas** intensity reducing technologies that have been developed, or are under development, by the National Laboratories, other Federal research facilities, institutions of higher education, and the private sector to determine which technologies are suitable for commercialization and deployment.

(3) Use
The Secretary shall use the results of the inventory as guidance in the commercialization and deployment of **greenhouse gas** intensity reducing technologies.

(f) **Climate change** Technology Advisory Committee

(1) In general
The Secretary, in consultation with the Committee, may establish under section 7234 of this title a **Climate change** Technology Advisory Committee to identify statutory, regulatory, economic, and other barriers to the commercialization and deployment of **greenhouse gas** intensity reducing technologies and practices in the United States.

(3) Report
Not later than 1 year after August 8, 2005, and annually thereafter, the Advisory Committee shall submit to the Committee a report that describes--
(A) the findings of the Advisory Committee; and
(B) any recommendations of the Advisory Committee for the removal or reduction of barriers to commercialization, deployment, and increasing the use of **greenhouse gas** intensity reducing technologies and practices.

(g) **Greenhouse gas** intensity reducing technology deployment

(1) In general
Based on the strategy developed under subsection (c)(1) of this section, the technology inventory conducted under subsection (e)(1) of this section, the **greenhouse gas** intensity reducing technology study report submitted under subsection (e)(2) of this section, and reports under subsection (f)(3) of this section, if any, the Committee shall develop recommendations that would provide for the removal of domestic barriers to the commercialization and deployment of **greenhouse gas** intensity reducing technologies and practices.

(3) Demonstration projects
In developing recommendations under paragraph (1), the Committee may identify the need for **climate change** technology demonstration projects.
(4) Report
Not later than 18 months after August 8, 2005, the Committee shall submit to the President and Congress a report that-- (A) identifies, based on the report submitted under subsection (f)(3) of this section, any barriers to, and commercial risks associated with, the deployment of **greenhouse gas** intensity reducing technologies;

(h) Procedures for calculating, monitoring, and analyzing **greenhouse gas** intensity

The Secretary, in collaboration with the Committee and the National Institute of Standards and Technology, and after public notice and opportunity for comment, shall develop standards and best practices for calculating, monitoring, and analyzing **greenhouse gas** intensity.

(i) Demonstration projects

(1) In general

The Secretary shall, subject to the availability of appropriations, support demonstration projects that--
(A) increase the reduction of the **greenhouse gas** intensity to levels below that which would be achieved by technologies being used in the United States as of August 8, 2005;
(B) maximize the potential return on Federal investment;
(C) demonstrate distinct roles in public-private partnerships;
(D) produce a large-scale reduction of **greenhouse gas** intensity if commercialization occurred; and
(E) support a diversified portfolio to mitigate the uncertainty associated with a single technology.
(j) Cooperative research and development agreements
In carrying out **greenhouse gas** intensity reduction research and technology deployment activities under this subtitle, the Secretary may enter into cooperative research and development agreements under section 3710a of Title 15.

Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter VIII. Reduction of Oil Vulnerability

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§ 13401. Goals

It is the goal of the United States in carrying out energy supply and energy conservation research and development--

(3) to reduce the air, water, and other environmental impacts (including emissions of **greenhouse gases**) of energy production, distribution, transportation, and utilization, through the development of an environmentally sustainable energy system;

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42 U.S.C.A. § 13479
Title 42. The Public Health and Welfare
Chapter 134. Energy Policy
Subchapter IX. Energy and Environment
Part B. Electricity Generation and Use

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§ 13479. Spark M. Matsunaga Renewable Energy and Ocean Technology Center

(b) Purpose

It is the purpose of this section to establish the facilities and equipment located at Keahole Point, Hawaii as a cooperative research and development facility, to be known as the Spark M. Matsunaga Renewable Energy and Ocean Technology Center.

(e) Activities

The Center may carry out research, development, educational, and technology transfer activities on--
(1) renewable energy;
(2) energy storage, including the production of hydrogen from renewable energy;
(3) materials applications related to energy and marine environments;
(4) other environmental and ocean research concepts, including sea ranching and global **climate change**; and
(5) such other matters as the Secretary may direct.

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42 U.S.C.A. § 16317
Title 42. The Public Health and Welfare
Chapter 149. National Energy Policy and Programs
Subchapter IX. Research and Development
Part G. Science

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§ 16317. Systems biology program

(a) Program

(1) Establishment
The Secretary shall establish a research, development, and demonstration program in microbial and plant systems biology, protein science, computational biology, and environmental science to support the energy, national security, and environmental missions of the Department.

(b) Goals

The program shall have the goal of developing technologies and methods based on the biological functions of genomes, microbes, and plants that--
(1) can facilitate the production of fuels, including hydrogen in sustainable production systems that reduce **greenhouse gas** emissions;

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42 U.S.C.A. § 16371
Title 42. The Public Health and Welfare
Chapter 149. National Energy Policy and Programs
Subchapter IX. Research and Development
Part J. Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources

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§ 16371. Program authority

(a) In general

The Secretary shall carry out a program under this part of research, development, demonstration, and commercial application of technologies for ultra-deepwater and unconventional natural gas and other petroleum resource exploration and production, including addressing the technology challenges for small producers, safe operations, and environmental mitigation (including reduction of **greenhouse gas** emissions and sequestration of carbon).

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42 U.S.C.A. § 16513
Title 42. The Public Health and Welfare
Chapter 149. National Energy Policy and Programs
Subchapter XV. Incentives for Innovative Technologies

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§ 16513. Eligible projects

(a) In general

The Secretary may make guarantees under this section only for projects that--
(1) avoid, reduce, or sequester air pollutants or anthropogenic emissions of **greenhouse gases**; and

(2) employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued.

(b) Categories

Projects from the following categories shall be eligible for a guarantee under this section:
(1) Renewable energy systems
(2) Advanced fossil energy technology (including coal gasification meeting the criteria in subsection (d) of this section).
(3) Hydrogen fuel cell technology for residential, industrial, or transportation applications.
(4) Advanced nuclear energy facilities.
(5) Carbon capture and sequestration practices and technologies, including agricultural and forestry practices that store and sequester carbon.
(6) Efficient electrical generation, transmission, and distribution technologies.
(7) Efficient end-use energy technologies.
(8) Production facilities for the manufacture of fuel efficient vehicles or parts of those vehicles, including electric drive vehicles and advanced diesel vehicles.

(9) Pollution control equipment.
(10) Refineries, meaning facilities at which crude oil is refined into gasoline.

(c) Gasification projects

The Secretary may make guarantees for the following gasification projects:
(1) Integrated gasification combined cycle projects

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42 U.S.C.A. § 16538
Title 42. The Public Health and Welfare
Chapter 149. National Energy Policy and Programs
Subchapter XVII. Protecting America's Competitive Edge through Energy

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§ 16538. Advanced Research Projects Agency--Energy

(c) Goals

(1) In general
The goals of ARPA-E shall be--
(A) to enhance the economic and energy security of the United States through the development of energy technologies that result in--
(i) reductions of imports of energy from foreign sources;
(ii) reductions of energy-related emissions, including **greenhouse gases**; and
(iii) improvement in the energy efficiency of all economic sectors; and
(B) to ensure that the United States maintains a technological lead in developing and deploying advanced energy technologies.

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42 U.S.C.A. § 17011
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter I. Improved Vehicle Technology

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§ 17011. Transportation electrification

(a) Definitions

(6) Qualified electric transportation project
The term “qualified electric transportation project” means an electric transportation technology project that would significantly reduce emissions of criteria pollutants, **greenhouse gas** emissions, and petroleum, including--

(b) Plug-in electric drive vehicle program

(4) Reporting
The Secretary shall require a grant recipient under this subsection to submit to the Secretary, on an annual basis, data relating to safety, vehicle performance, life cycle costs, and emissions of vehicles demonstrated under the grant, including emissions of **greenhouse gases**.

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42 U.S.C.A. § 17022
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security

Subchapter II. Energy Security through Increased Production of Biofuels
Part A. Renewable Fuel Standard

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§ 17022. Grants for production of advanced biofuels

(b) Requirements and priority

In making grants under this section, the Secretary--
(1) shall make awards to the proposals for advanced biofuels with the greatest reduction in lifecycle **greenhouse gas** emissions compared to the comparable motor vehicle fuel lifecycle emissions during calendar year 2005; and
(2) shall not make an award to a project that does not achieve at least an 80 percent reduction in such lifecycle **greenhouse gas** emissions.

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42 U.S.C.A. § 17061
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter III. Energy Savings in Buildings and Industry

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§ 17061. Definitions

(20) Zero-net-energy commercial building
The term "zero-net-energy commercial building" means a commercial building that is designed, constructed, and operated to--
(A) require a greatly reduced quantity of energy to operate;
(B) meet the balance of energy needs from sources of energy that do not produce **greenhouse gases**;
(C) therefore result in no net emissions of **greenhouse gases**; and
(D) be economically viable.

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42 U.S.C.A. § 17082
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter III. Energy Savings in Buildings and Industry
Part B. High-Performance Commercial Buildings

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§ 17082. Zero Net Energy Commercial Buildings Initiative

(a) Definitions

(3) Zero-net-energy commercial building
The term "zero-net-energy commercial building" means a high-performance commercial building that is designed, constructed, and operated--
(A) to require a greatly reduced quantity of energy to operate;
(B) to meet the balance of energy needs from sources of energy that do not produce **greenhouse gases**;
(C) in a manner that will result in no net emissions of **greenhouse gases**; and
(D) to be economically viable.

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42 U.S.C.A. § 17131
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security

Subchapter IV. Energy Savings in Government and Public Institutions
Part A. Energy Savings Performance Contracting

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§ 17131. Training Federal contracting officers to negotiate energy efficiency contracts

(a) Program

The Secretary shall create and administer in the Federal Energy Management Program a training program to educate Federal contract negotiation and contract management personnel so that the contract officers are prepared to--
(1) negotiate energy savings performance contracts;
(2) conclude effective and timely contracts for energy efficiency services with all companies offering energy efficiency services; and
(3) review Federal contracts for all products and services for the potential energy efficiency opportunities and implications of the contracts…

(c) Personnel to be trained

Personnel appropriate to receive training under the Federal Energy Management Program shall be selected by and sent for the training from--
(1) the Department of Defense; (2) the Department of Veterans Affairs; (3) the Department; (4) the General Services Administration; (5) the Department of Housing and Urban Development; (6) the United States Postal Service; and (7) all other Federal agencies and departments that enter contracts for buildings, building services, electricity and electricity services, natural gas and natural gas services, heating and air conditioning services, building fuel purchases, and other types of procurement or service contracts determined by the Secretary, in carrying out the Federal Energy Management Program, to offer the potential for energy savings and **greenhouse gas** emission reductions if negotiated with taking into account those goals.

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42 U.S.C.A. § 17142
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter IV. Energy Savings in Government and Public Institutions
Part B. Energy Efficiency in Federal Agencies

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§ 17142. Procurement and acquisition of alternative fuels

No Federal agency shall enter into a contract for procurement of an alternative or synthetic fuel, including a fuel produced from nonconventional petroleum sources, for any mobility-related use, other than for research or testing, unless the contract specifies that the lifecycle **greenhouse gas** emissions associated with the production and combustion of the fuel supplied under the contract must, on an ongoing basis, be less than or equal to such emissions from the equivalent conventional fuel produced from conventional petroleum sources.

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42 U.S.C.A. § 17143
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security

Subchapter IV. Energy Savings in Government and Public Institutions
Part B. Energy Efficiency in Federal Agencies

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§ 17143. Government efficiency status reports

(a) In general

Each Federal agency subject to any of the requirements of this title or the amendments made by this title shall compile and submit to the Director of the Office of Management and Budget an annual Government efficiency status report on--

(2) the status of the implementation by the agency of initiatives to improve energy efficiency, reduce energy costs, and reduce emissions of **greenhouse gases**; and

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42 U.S.C.A. § 17154
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter IV. Energy Savings in Government and Public Institutions
Part C. Energy Efficiency and Conservation Block Grants

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§ 17154. Use of funds

An eligible entity may use a grant received under this part to carry out activities to achieve the purposes of the program, including--

(11) the purchase and implementation of technologies to reduce, capture, and, to the maximum extent practicable, use methane and other **greenhouse gases** generated by landfills or similar sources;

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42 U.S.C.A. § 17193
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter V. Accelerated Energy Research and Development
Part B. Geothermal Energy

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§ 17193. General geothermal systems research and development

(c) Environmental impacts

The Secretary shall--
(1) support a program of research, development, demonstration, and commercial application of technologies and practices designed to mitigate or preclude potential adverse environmental impacts of geothermal energy development, production or use, and seek to ensure that geothermal energy development is consistent with the highest practicable standards of environmental stewardship;
(2) in conjunction with the Assistant Administrator for Research and Development at the Environmental Protection Agency, support a research program to identify potential environmental impacts of geothermal energy development, production, and use, and ensure that the program described in paragraph (1) addresses such impacts, including effects on groundwater and local hydrology; and
(3) support a program of research to compare the potential environmental impacts identified as part of the development, production, and use of geothermal energy with the potential emission reductions of **greenhouse gases** gained by geothermal energy development, production, and use.

42 U.S.C.A. § 17255
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter VI. Carbon Capture and Sequestration
Part A. Carbon Capture and Sequestration Research, Development, and Demonstration

§ 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.

42 U.S.C.A. § 17272
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter VI. Carbon Capture and Sequestration
Part B. Carbon Capture and Sequestration Assessment and Framework

§ 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) of this section.
(3) Covered **greenhouse gas**
The term "covered **greenhouse gas** " means carbon dioxide, nitrous oxide, and methane gas.

(b) Authorization of assessment

Not later than 2 years after the date on which the final methodology is published under subsection (f)(3)(D) of this section, 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) of this section, 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) of this section and management strategies and adaptation strategies under subsection (c)(3) of this section, 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.

(f) Methodology

(1) In general
Not later than 1 year after December 19, 2007, the Secretary shall develop a methodology for conducting the assessment.
(2) Requirements
The methodology developed under paragraph (1)--
(A) shall--
(i) determine the method for measuring, monitoring, and quantifying covered **greenhouse gas** emissions and reductions;
(ii) estimate the total capacity of each ecosystem to sequester carbon; and
(iii) estimate the ability of each ecosystem to reduce emissions of covered **greenhouse gases** through management practices; and

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42 U.S.C.A. § 17321
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter VIII. International Energy Programs

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§ 17321. Definitions

(2) Clean and efficient energy technology
The term "clean and efficient energy technology" means an energy supply or end-use technology that, compared to a similar technology already in widespread commercial use in a recipient country, will--
(A) reduce emissions of **greenhouse gases**; or
(B)(i) increase efficiency of energy production; or
(ii) decrease intensity of energy usage.
(3) **Greenhouse gas**
The term "**greenhouse gas** " means--
(A) carbon dioxide;
(B) methane;
(C) nitrous oxide;
(D) hydrofluorocarbons;
(E) perfluorocarbons; or
(F) sulfur hexafluoride.

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42 U.S.C.A. § 17331
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter VIII. International Energy Programs

Part A. Assistance to Promote Clean and Efficient Energy Technologies in Foreign Countries

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§ 17331. United States assistance for developing countries

(a) Assistance authorized

The Administrator of the United States Agency for International Development shall support policies and programs in developing countries that promote clean and efficient energy technologies--
(1) to produce the necessary market conditions for the private sector delivery of energy and environmental management services;
(2) to create an environment that is conducive to accepting clean and efficient energy technologies that support the overall purpose of reducing **greenhouse gas** emissions, including--
(A) improving policy, legal, and regulatory frameworks;
(B) increasing institutional abilities to provide energy and environmental management services; and
(C) increasing public awareness and participation in the decision-making of delivering energy and environmental management services; and
(3) to promote the use of American-made clean and efficient energy technologies, products, and energy and environmental management services.

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42 U.S.C.A. § 17332

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§ 17332. United States exports and outreach programs for India, China, and other countries

(a) Assistance authorized

The Secretary of Commerce shall direct the United States and Foreign Commercial Service to expand or create a corps of the Foreign Commercial Service officers to promote United States exports in clean and efficient energy technologies and build the capacity of government officials in India, China, and any other country the Secretary of Commerce determines appropriate, to become more familiar with the available technologies--
(1) by assigning or training Foreign Commercial Service attaches, who have expertise in clean and efficient energy technologies from the United States, to embark on business development and outreach efforts to such countries; and
(2) by deploying the attaches described in paragraph (1) to educate provincial, state, and local government officials in such countries on the variety of United States-based technologies in clean and efficient energy technologies for the purposes of promoting United States exports and reducing global **greenhouse gas** emissions.

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42 U.S.C.A. § 17333

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§ 17333. United States trade missions to encourage private sector trade and investment

(a) Assistance authorized

The Secretary of Commerce shall direct the International Trade Administration to expand or create trade missions to and from the United States to encourage private sector trade and investment in clean and efficient energy technologies--
(1) by organizing and facilitating trade missions to foreign countries and by matching United States private sector companies with opportunities in foreign markets so that clean and efficient energy technologies can help to combat increases in global **greenhouse gas** emissions; and

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42 U.S.C.A. § 17334

§ 17334. Actions by overseas private investment corporation

(a) Sense of Congress

It is the sense of Congress that the Overseas Private Investment Corporation should promote greater investment in clean and efficient energy technologies by--
(1) proactively reaching out to United States companies that are interested in investing in clean and efficient energy technologies in countries that are significant contributors to global **greenhouse gas** emissions;
(2) giving preferential treatment to the evaluation and awarding of projects that involve the investment or utilization of clean and efficient energy technologies; and
(3) providing greater flexibility in supporting projects that involve the investment or utilization of clean and efficient energy technologies, including financing, insurance, and other assistance.

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42 U.S.C.A. § 17335

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§ 17335. Actions by United States Trade and Development Agency

(a) Assistance authorized

The Director of the Trade and Development Agency shall establish or support policies that--
(1) proactively seek opportunities to fund projects that involve the utilization of clean and efficient energy technologies, including in trade capacity building and capital investment projects;
(2) where appropriate, advance the utilization of clean and efficient energy technologies, particularly to countries that have the potential for significant reduction in **greenhouse gas** emissions; and
(3) recruit and retain individuals with appropriate expertise or experience in clean, renewable, and efficient energy technologies to identify and evaluate opportunities for projects that involve clean and efficient energy technologies and services.

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42 U.S.C.A. § 17336

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§ 17336. Deployment of international clean and efficient energy technologies and investment in global energy markets

(c) Strategy

(1) In general
Not later than 1 year after December 19, 2007, the Task Force shall develop and submit to the President and the appropriate congressional committees a strategy to--
(A) support the development and implementation of programs, policies, and initiatives in developing countries to promote the adoption and deployment of clean and efficient energy technologies, with an emphasis on those developing countries that are expected to experience the most significant growth in energy production and use over the next 20 years;
(B) open and expand clean and efficient energy technology markets and facilitate the export of clean and efficient energy technologies to developing countries, in a manner consistent with United States obligations as a member of the World Trade Organization;
(C) Integrate into the foreign policy objectives of the United States the promotion of--
(i) the deployment of clean and efficient energy technologies and the reduction of **greenhouse gas** emissions in developing countries; and
(ii) the export of clean and efficient energy technologies; and…

42 U.S.C.A. § 17352
Title 42. The Public Health and Welfare
Chapter 152. Energy Independence and Security
Subchapter VIII. International Energy Programs
Part B. International Clean Energy Foundation

§ 17352. Establishment and management of Foundation

(a) Establishment

(1) In general
There is established in the executive branch a foundation to be known as the "International Clean Energy Foundation" that shall be responsible for carrying out the provisions of this part. The Foundation shall be a government corporation, as defined in section 103 of Title 5.
(2) Board of Directors
The Foundation shall be governed by a Board of Directors in accordance with subsection (c) of this section.
(3) Intent of Congress
It is the intent of Congress, in establishing the structure of the Foundation set forth in this subsection, to create an entity that serves the long-term foreign policy and energy security goals of reducing global **greenhouse gas** emissions.

(b) Chief Executive Officer

(1) In general
There shall be in the Foundation a Chief Executive Officer who shall be responsible for the management of the Foundation.
(2) Appointment
The Chief Executive Officer shall be appointed by the Board, with the advice and consent of the Senate, and shall be a recognized leader in clean and efficient energy technologies and **climate change** and shall have experience in energy security, business, or foreign policy, chosen on the basis of a rigorous search.

42 U.S.C.A. § 17353

§ 17353. Duties of Foundation

The Foundation shall--
(1) use the funds authorized by this part to make grants to promote projects outside of the United States that serve as models of how to significantly reduce the emissions of global **greenhouse gases** through clean and efficient energy technologies, processes, and services;
(2) seek contributions from foreign governments, especially those rich in energy resources such as member countries of the Organization of the Petroleum Exporting Countries, and private organizations to supplement funds made available under this part;
(3) harness global expertise through collaborative partnerships with foreign governments and domestic and foreign private actors, including nongovernmental organizations and private sector companies, by leveraging public and private capital, technology, expertise, and services towards innovative models that can be instituted to reduce global **greenhouse gas** emissions;
(4) create a repository of information on best practices and lessons learned on the utilization and implementation of clean and efficient energy technologies and processes to be used for future initiatives to tackle the **climate change** crisis;

(5) be committed to minimizing administrative costs and to maximizing the availability of funds for grants under this part; and
(6) promote the use of American-made clean and efficient energy technologies, processes, and services by giving preference to entities incorporated in the United States and whose technology will be substantially manufactured in the United States.

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49 U.S.C.A. § 102
Title 49. Transportation
Subtitle I. Department of Transportation
Chapter I. Organization

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§ 102. Department of Transportation

(g) Office of **Climate change** and Environment.--
(1) Establishment.--There is established in the Department an Office of **Climate change** and Environment to plan, coordinate, and implement--
(A) department-wide research, strategies, and actions under the Department's statutory authority to reduce transportation-related energy use and mitigate the effects of **climate change**; and
(B) department-wide research strategies and actions to address the impacts of **climate change** on transportation systems and infrastructure.
(2) Clearinghouse.--The Office shall establish a clearinghouse of solutions, including cost-effective congestion reduction approaches, to reduce air pollution and transportation-related energy use and mitigate the effects of **climate change**.

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49 U.S.C.A. § 22301
Title 49. Transportation
Subtitle V. Rail Programs
Part B. Assistance
Chapter 223. Capital Grants for Class II and Class III Railroads

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§ 22301. Capital grants for class II and class III railroads

(a) Establishment of program.--

(1) Establishment.--The Secretary of Transportation shall establish a program for making capital grants to class II and class III railroads. Such grants shall be for projects in the public interest that--
(A)(i) rehabilitate, preserve, or improve railroad track (including roadbed, bridges, and related track structures) used primarily for freight transportation;
(ii) facilitate the continued or greater use of railroad transportation for freight shipments; and
(iii) reduce the use of less fuel efficient modes of transportation in the transportation of such shipments; and
(B) demonstrate innovative technologies and advanced research and development that increase fuel economy, reduce **greenhouse gas** emissions, and lower the costs of operation.

(f) Study.--The Secretary shall conduct a study of the projects carried out with grant assistance under this section to determine the extent to which the program helps promote a reduction in fuel use associated with the transportation of freight and demonstrates innovative technologies that increase fuel economy, reduce **greenhouse gas** emissions, and lower the costs of operation. Not later than March 31, 2009, the Secretary shall submit a report to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate on the study, including any recommendations the Secretary considers appropriate regarding the program.

(g) Authorization of appropriations.--There is authorized to be appropriated to the Secretary $50,000,000 for each of fiscal years 2008 through 2011 for carrying out this section.

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49 U.S.C.A. § 32908
Title 49. Transportation
Subtitle VI. Motor Vehicle and Driver Programs
Part C. Information, Standards, and Requirements
Chapter 329. Automobile Fuel Economy

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§ 32908. Fuel economy information

(g) Consumer information.--
(1) Program.--The Secretary of Transportation, in consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency, shall develop and implement by rule a program to require manufacturers--
(A) to label new automobiles sold in the United States with--
(i) information reflecting an automobile's performance on the basis of criteria that the Administrator shall develop, not later than 18 months after the date of the enactment of the Ten-in-Ten Fuel Economy Act, to reflect fuel economy and **greenhouse gas** and other emissions over the useful life of the automobile;
(ii) a rating system that would make it easy for consumers to compare the fuel economy and **greenhouse gas** and other emissions of automobiles at the point of purchase, including a designation of automobiles--
(I) with the lowest **greenhouse gas** emissions over the useful life of the vehicles; and
(II) the highest fuel economy; and
(iii) a permanent and prominent display that an automobile is capable of operating on an alternative fuel; and
(B) to include in the owner's manual for vehicles capable of operating on alternative fuels information that describes that capability and the benefits of using alternative fuels, including the renewable nature and environmental benefits of using alternative fuels.

Appendix B

Proclamations that Address Global Warming, Climate Change or Greenhouse Gas Emissions

The following is a list of the 17 proclamations published in the *Federal Register* that include the terms global warming, climate change or greenhouse gas, and excerpts from the proclamations with some notable language: [1]

1) **Proc. 6085, Jan. 3, 1990,** Earth Day, George Bush:[2] "Tremendous progress has been made during the past 20 years in addressing environmental problems, yet great challenges remain. Many scientists are concerned that a buildup of certain gases in the atmosphere may cause significant climate changes with serious, widespread consequences, and there is growing evidence that the stratospheric ozone layer is gradually being depleted. . . . That is why, as we welcome the promise of a new decade, we must strengthen and renew our commitment to environmental protection. . . . The United States has also been a leader in the worldwide effort to study and address global climate change. Through our participation in the Intergovernmental Panel on Climate Change, we are working to promote environmental safeguards not only at home but also abroad. Today we vow to press on with this vital work. On the day he signed the National Environmental Policy Act, President Nixon said the 1970s 'must be the years when America pays its debt to the past by reclaiming the purity of its air, its waters, and our living environment.' Today I say the 1990s must be the years when we not only pay our debt to the past, but also fulfill our obligation to protect this earthly home for generations yet unborn."

2) **Proc. 6274, Apr. 22, 1991,** Earth Day, George Bush:[3] "Through our firm commitment and our substantial investment, we have improved significantly the quality of our air, land, and water resources. The United States leads the world in environmental protection, and we intend to keep it that way. Our accomplishments during the past year are a special source of pride. During 1990 the United States was instrumental in strengthening the Montreal Protocol on Substances That Deplete the Ozone Layer. . . . We expanded the world's leading global climate change research program, and we took several domestic policy actions including an ambitious reforestation initiative, that will reduce harmful emissions that can contribute to the 'greenhouse effect.'"

3) **Proc. 6498, Oct. 24, 1992,** United Nations Day, George Bush: "Recently the United States was proud to become the first industrialized nation to ratify the

[1] Footnotes identify proclamations supported by legislation.
[2] Senate Joint Resolution 159 has authorized and requested the President to issue a proclamation in observance of this day.
[3] Senate Joint Resolution 119 has designated April 22, 1991, as "Earth Day" and has authorized and requested the President to issue a proclamation in observance of this day.

United Nations Framework Convention on Global Climate Change, which was signed in Rio de Janeiro in June."

4) **Proc. 6920, Sept. 18, 1996,** Establishment of the Grand Staircase-Escalante National Monument, Bill Clinton: See first paragraph of this section.

5) **Proc. 7094, May 8, 1998,** National Defense Transportation Day and Week, Bill Clinton:[4] "While recognizing the many benefits we derive from our transportation system, we also acknowledge the need to use and develop it responsibly to ensure the protection of our environment. We are making progress in this goal as well: we have funded many projects to improve transit services and accommodations for bicyclists and pedestrians; we are turning historic railroad terminals into multimodal transportation centers; and funds from transportation programs have helped to support wetlands restoration projects and have aided communities in planning both transit projects and sustainable development. We must build on these efforts by also working to reduce the pollutants and greenhouse gases that our transportation system creates. Recognizing the need for safety, security, and environmental stewardship in America's transportation system, we also must invest in our transportation infrastructure."

6) **Proc. 7101, May 29, 1998,** National Alternative Fuels Week, Bill Clinton: "Today's American transportation system remains enormously dependent on oil. Highway transportation alone accounts for more than half of our Nation's oil demand, . . . Transportation is the second largest contributor to U.S. GHG emissions and will likely be the most significant contributor by the year 2000. Fortunately, vehicles that are powered by alternatives to conventional gasoline and diesel fuels are already on the market, and domestically produced, renewable alternative fuels are readily available to American consumers. These alternative fuels--such as ethanol, methanol, natural gas, propane, electricity, and biodiesel--can make significant contributions to our energy security and environmental quality. By increasing the use of alternative fuel vehicles (AFVs), we can reduce our demand for imported oil, create new products, jobs, and businesses, and improve air quality by dramatically reducing carbon dioxide emissions as well as the hydrocarbons, nitrogen oxides, and particulate matter that are such major contributors to urban air pollution."

7) **Proc. 7104, Jun. 5, 1998,** National Homeownership Week, Bill Clinton: "The new partnership I recently launched with America's building industry--the Partnership for Advancing Technology in Housing--will dramatically improve the energy efficiency of new homes, reducing the greenhouse gases that cause global warming and cutting homeowners' energy bills."

[4] The United States Congress, by joint resolution approved May 14, 1962 (36 U.S.C. 166), declared that the week in which that Friday falls be designated "National Transportation Week."

8) **Proc. 7150, Nov. 20, 1998,** World Fisheries Day, Bill Clinton: "A recent United Nations study reported that more than two-thirds of the world's fisheries have been overfished or are fully harvested and more than one third are in a state of decline because of factors like the loss of essential fish habitats, pollution, and global warming."

9) **Proc. 7262, Dec. 16, 1999**, Wright Brothers Day, Bill Clinton:[5] "Today's astronauts fly space shuttle missions that are helping us meet the challenge of global climate change, bringing the International Space Station closer to completion, and expanding our knowledge of Earth and the universe."

10) **Proc. 7308, May 15, 2000,** National Defense Transportation Day and Week, Bill Clinton:[6] "Another of our great transportation challenges is to develop alternative fuels and clean energy sources that will not harm our environment. Earlier this year, I signed an Executive Order to ensure the Federal Government's leadership in reducing petroleum consumption and promoting the use of alternative fuel vehicles (AFVs). By developing and using AFVs, we can reduce greenhouse gases and other pollutants, enhance our Nation's energy self-sufficiency by reducing the demand for imported oil, and create new products and jobs."

11) **Proc. 7846, Nov. 15, 2000,** America Recycles Day, Bill Clinton: "Buying recycled products conserves resources, reduces water and air pollution and GHG emissions, and saves energy. While beneficial for the environment, the recycling process is good for our economy as well."

12) **Proc. 7676, May 9, 2003,** National Defense Transportation Day and National Transportation Week, George W. Bush:[7] ". . . we must continue to invest in our Nation's transportation systems. From enhancing existing highways, waterways, railway lines, pipelines, and airports, to developing fuel-efficient and reduced-emissions vehicles, we must work towards improving safety, protecting the environment, and furthering our national defense. As part of these efforts, my Administration has announced a hydrogen fuel initiative to reverse America's growing dependence on foreign oil by developing the technology to produce commercially viable, hydrogen fuel cells, which will help power cars and trucks with no emissions of air pollution or greenhouse gases. This new national

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[5] The Congress, by a joint resolution approved December 17, 1963 (77 Stat. 402; 36 U.S.C. 169), has designated December 17 of each year as "Wright Brothers Day" and has authorized and requested the President to issue annually a proclamation inviting the people of the United States to observe that day with appropriate ceremonies and activities.

[6] The United States Congress, by joint resolution approved May 16, 1957 (36 U.S.C. 120), has designated the third Friday in May of each year as "National Defense Transportation Day," and by joint resolution approved May 14, 1962 (36 U.S.C. 133), declared that the week during which that Friday falls be designated "National Transportation Week."

[7] The Congress, by joint resolution approved May 16, 1957, as amended (36 U.S.C. 120), has designated the third Friday in May of each year as "National Defense Transportation Day," and by joint resolution approved May 14, 1962, as *26198 amended (36 U.S.C. 133), declared that the week during which that Friday falls be designated as "National Transportation Week."

commitment could make it possible for the first car driven by a child born today to be powered by hydrogen, and be pollution-free."

13) **Proc. 7734, Nov. 14, 2003,** America Recycles Day, George W. Bush: "Manufacturers, retailers, and governmental and non-governmental organizations are engaging in voluntary product stewardship partnerships to reduce waste. Industries are also discovering ways to reduce waste and cost, cut pollution and GHG emissions, and conserve energy and water. . . . I encourage individuals, businesses, communities, tribes, and government to continue to work together as good stewards of America's resources. By using our resources wisely, we help build a stronger economy and a healthier future."

14) **Proc. 7846, Nov. 15, 2004,** America Recycles Day, George W. Bush: "Recycling helps conserve energy and natural resources, provides raw materials for key domestic industries, reduces air and water pollution, cuts GHG emissions, and promotes the development of cleaner technologies."

15) **Proc. 8083, Nov. 14, 2006,** America Recycles Day, George W. Bush: "Recycling helps conserve energy, prevent GHG emissions and water pollutants, and decrease the need for new landfills and incinerators. . . . To further reduce GHG emissions and save energy, the EPA is also partnering with manufacturers, utility companies, and construction companies through the Industrial Materials Recycling effort to increase the safe re-use of industrial byproducts. Americans are united in the belief that we have an obligation to be good stewards of the environment . . . ."

16) **Proc. 8149, May 25, 2007,** Great Outdoors Month, George W. Bush: "We are also promoting responsible stewardship and conservation of our air, water, and land. Harmful air pollutants are down more than 10 percent since 2001, but there is more work to be done. Through the 'Twenty in Ten' plan, my Administration aims to limit GHG emissions from motor vehicles and reduce America's dependence on oil by cutting our gasoline usage by 20 percent over the next 10 years."

17) **Proc. 8203, Nov. 15, 2007,** America Recycles Day, George W. Bush: "On America Recycles Day and throughout the year, I encourage all Americans to recycle appropriate materials and products. By recycling, reducing GHG emissions, and conserving energy, we can help build a healthier environment for everyone."