Calendar No. 267

111TH CONGRESS *2d Session*	SENATE	REPORT 111–121

CLEAN ENERGY JOBS AND AMERICAN POWER ACT

R E P O R T

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

TO ACCOMPANY

S. 1733

together with

ADDITIONAL AND MINORITY VIEWS

FEBRUARY 2, 2010.—Ordered to be printed

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FEBRUARY 2, 2010.—Ordered to be printed

Mrs. BOXER, from the Committee on Environment and Public Works, submitted the following

R E P O R T

[To accompany S. 1733]

together with

ADDITIONAL AND MINORITY VIEWS

[Including cost estimate of the Congressional Budget Office]

The Committee on Environment and Public Works, to which was referred a bill (S. 1733) to create clean energy jobs, promote energy independence, reduce global warming pollution, and transition to a clean energy economy, having considered the same, reports favorably with an amendment thereon and recommends that the bill, as amended, do pass.

INTRODUCTION AND PURPOSES

The Clean Energy Jobs and American Power Act was introduced by Senator Kerry, Chairman of the Committee on Foreign Relations, and co-sponsored by Senator Boxer, Chairman of the Committee on Environment and Public Works, on September 30, 2009. The bill was referred to the Committee, considered at a markup by the Committee held on November 3–5, 2009, and ordered favorably reported.

The Act's primary purposes are to: maintain American global economic leadership and create clean energy jobs; achieve energy independence; support reliance on a wide variety of energy sources, as well as energy efficiency; promote national security; reduce global warming pollution; and establish a framework for a new clean energy economy.

BACKGROUND AND NEED FOR LEGISLATION

MAINTAINING GLOBAL ECONOMIC LEADERSHIP AND CREATING CLEAN ENERGY JOBS

Clean energy is the global economic opportunity of the 21st century.

Venture capitalists and governments alike are increasingly recognizing the promise of clean energy. The global clean energy market is estimated to reach $500 billion a year by 2020, 2½ times the current global PC market of $200 billion.

Clean energy is a prominent and growing piece of the $6 trillion world energy market. Today there are 4 billion consumers of electricity; that number is expected to increase quickly, doubling global energy use over the next 25 years. The President's Economic Recovery Advisory Board concluded that clean energy "is perhaps the largest economic opportunity of the 21st century." And 'first actors'—the companies and countries who invest early in the clean energy economy—will benefit as more nations commit to clean energy goals and fuel the clean energy marketplace.[1]

According to the International Energy Agency, more than $26 trillion will be invested worldwide in energy infrastructure in the next two decades.[2] This is "the next great global industry" according to John Doerr, head of one the leading U.S. venture capital firms.[3] As the CEO of GE Energy testified: "The U.S. can stand by and watch other countries take the leadership role in these technologies, and accrue the economic benefits that go with it, or act swiftly to ensure that there is a large domestic industry for the best technologies."[4]

Today, the U.S. has an opportunity to solidify its leadership role in the race to deliver clean energy to the global market, but other nations are moving quickly to seize these opportunities as well. Although many clean energy technologies were developed in the U.S., other countries—including Germany, Spain, and China—have jumped out ahead on deployment and are rapidly increasing their market share. For instance, in 2001, the U.S. held 28 percent of the world's solar manufacturing market, and China had just 1 percent. By 2008, China's market share had grown to 29 percent, while America's had dropped to 6 percent.[5]

As of mid-2009, just 2 of the top 10 solar photovoltaic manufacturers, 1 of the top 10 wind turbine manufacturers and 1 of the top 10 advanced battery manufacturers were American.[6] As Mr. Doerr noted: "If you list today's top 30 companies in solar, wind, and advanced batteries, American companies hold only 6 spots. That fact should worry us all."[7] He added that: "current policies are the

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[1] The Climate Group, "Cutting the Cost," September 2009.
[2] International Energy Agency, World Energy Outlook 2008 at 5 (2008).
[3] Testimony of John Doerr before Senate Committee on Environment & Public Works, "Investing in Green Technology as a Strategy for Economic Recovery," January 7, 2009.
[4] Testimony of John Krenicki before Senate Committee on Environment & Public Works hearing, "Ensuring & Enhancing U.S. Competitiveness while Moving toward a Clean Energy Economy." July 16, 2009.
[5] Environmental Defense Fund citing PV News April 2009.
[6] Lazard, 7/10/09
[7] January 7, 2009.

principal obstacle to creating even more new jobs in the next great industry, clean technology."[8]

Comprehensive clean energy legislation is one of the keys to ensuring that U.S. companies can take advantage of the opportunities in the global clean energy marketplace today. The bill provides a comprehensive framework that will stimulate the large scale investments needed for low- and zero-carbon sources of energy and energy efficiency.

These investments are expected to create millions of new jobs. Between 1998 and 2007, clean industry jobs grew at a rate of 9 percent, far faster than the economy as a whole.[9] Two of the most thorough analyses of the economic benefits from investing in a clean energy economy have projected major new job growth, on the order of 1.7–1.9 million net new jobs created.[10,11]

These statistics have been affirmed by business leaders testifying before the committees. Wayne Krouse, CEO of Hydro Green Energy, LLC testified before the Committee that:

> "[P]olicies, such as climate change legislation, that recognize and financially value the many benefits of our nation's clean energy technologies, particularly their carbon-free profile, will act as a huge driver for growth and development of the clean technology industry."[12] Charles O. Holliday, Jr. CEO of Dupont believes: "Federal legislation will help create the marketplace that will drive innovation, economic growth, and environmental progress."[13] The Committee heard extensive testimony from other representatives of utilities, businesses, unions and investors, who collectively made clear that comprehensive climate legislation is necessary to create the certainty that will attract the large scale private capital investments necessary to spur clean energy job growth.

ACHIEVING ENERGY INDEPENDENCE

The current economic challenges are exacerbated by America's reliance on imported oil. America transfers about $330 billion every year to foreign countries to pay for oil.[14] With policies that promote American clean energy and energy efficiency, that money can be spent and then reinvested here in the United States, providing the capital for sustained economic recovery, rather than being sent overseas.

The transition to clean energy means ensuring that all of America's energy sources are as clean and efficient as possible, without damaging our short-term competitiveness. To make America more

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[8] Testimony of John Doerr before Senate Committee on Environment & Public Works, "Ensuring and Enhancing U.S. Competitiveness while Moving toward a Clean Energy Economy," July 16, 2009.

[9] Pew Charitable Trusts, The Clean Energy Economy, 8 (June 2009).

[10] Political Economy Research Institute/University of Massachusetts, Amherst; "The Economic Benefits of Investing in Clean Energy," June 2009.

[11] University of California at Berkeley, Clean Energy and Climate Policy for U.S. Growth and Job Creation, Oct. 25, 2009. Can be accessed at: *http://are.berkeley.edu/dwrh/CERES_Web/Docs/ES_DRHFK091025.pdf.*

[12] Testimony of Wayne F. Krouse before Senate Committee on Environment & Public Works, "Business Opportunities and Climate Policy," May 19, 2009.

[13] Testimony of Charles O. Holliday, Jr. before Senate Committee on Environment & Public Works, "Business Opportunities and Climate Policy," May 19, 2009.

[14] Energy Information Administration Annual Energy Review 2008, pages 210–211; can be accessed at: *http://www.eia.doe.gov/emeu/aer/pdf/aer.pdf.*

energy independent, the Act provides incentives for investment in each of these sources of power.

Coal is the source for approximately 50% of our electric power generation.[15] The United States has the largest estimated recoverable coal reserves in the world, with 28% of global reserves,[16] and experts agree that coal will continue to play a significant part in our energy future, both in the United States and throughout the world.[17]

Technology must be developed to address the use of coal and its associated global warming emissions. The Act invests an estimated $10 billion over ten years to support research and development of new carbon capture and sequestration technology, to advance the next generation of coal-fired power plants.

Natural gas is the cleanest form of fossil fuel generated power, producing less than half of the carbon dioxide emissions of equivalent energy output from burning coal. Currently, natural gas provides nearly 20% of our Nation's power.[18] Recent discoveries and advances in drilling technologies have increased America's estimated natural gas reserves by 35%, decreasing our need to import natural gas from outside of North America.[19]

The Act creates a new federal program that encourages investment in low-carbon power generation, especially natural gas. It also provides additional incentives that provide offset credits to companies that reduce leaks from natural gas pipelines. This will help ensure that America can rely on natural gas as a major component of its energy supply.

Nuclear energy currently provides nearly 20% of our power—up to as much as 50% of electricity in some states.[20] The Act supports new programs for research and development for advanced nuclear technology and nuclear waste management, and training programs to train the highly-skilled workforce necessary for the construction, operation, maintenance and support of nuclear facilities. The bill's pollution reduction program creates strong incentives for the development of additional nuclear powered electric generation facilities. EPA's analysis indicates that under comprehensive climate change legislation, the U.S. will be expected to add nearly 160 new nuclear power plants by 2050.[21]

Renewable energy and energy efficiency are critical to America's future clean energy economy. In the short term, increased energy efficiency presents tremendous, low-cost opportunities both to re-

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[15] Energy Information Administration, Electricity in the United States. Can be accessed at: *http://tonto.eia.doe.gov/energyexplained/index.cfm?page=electricity_in_the_united_states.*

[16] U.S. Department of Energy, Energy Information Administration, Coal Explained, How Much Coal Is Left (online at *www.eia.doe.gov/neic/infosheets/coalreserves.html*); and U.S. Department of Energy, Energy Information Administration, International Energy Outlook (May 2009) at p.59, Table 9 (online at *http://www.eia.doe.gov/oiaf/ieo/pdf/0484(2009).pdf*).

[17] The Future of Coal—Options for a Carbon-Constrained World, Massachusetts Institute of Technology Interdisciplinary Study (2007), at ix (online at *http://web.mit.edu/coal/*).

[18] Id.

[19] "Potential Gas Committee Reports Unprecedented Increase in Magnitude of U.S. Natural Gas Resource Base." Colorado School of Mines. June 18, 2009. Can be accessed at: *http://www.mines.edu/Potential-Gas-Committee-reports-unprecedented-increase-in-magnitude-of-U.S.-natural-gas-resource-base.*

[20] Energy Information Administration, Electricity in the United States. Can be accessed at: *http://tonto.eia.doe.gov/energyexplained/index.cfm?page=electricity_in_the_united_states.*

[21] See EPA Analysis of the American Clean Energy & Security Act of 2009, H.R. 2454 in the 111th Congress (June 23, 2009) at 10; EPA Analysis of Economic Impacts of S. 1733: The Clean Energy Jobs and American Power Act of 2009 (October 23, 2009); available at: *http://www.epa.gov/climatechange/economics/economicanalyses.html;* U.S. Nuclear Regulatory Commission data on current capacity, *http://www.nrc.gov/info-finder/reactor/*.

duce carbon emissions and to create economic benefits. The global consulting firm McKinsey & Company estimates that addressing barriers to energy efficiency improvements can reduce end-use energy consumption in 2020 by roughly 23 percent of projected demand, potentially abating up to 1.1 gigatons of greenhouse gases annually.[22] Already nearly a thousand U.S. cities have adopted ambitious environmental standards for new construction and refitting existing buildings.[23] By creating a framework and incentives to achieve greater energy efficiencies, the Act will help American companies to profit and improve their international competitive position.

CLIMATE CHANGE SCIENCE AND IMPACTS

The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the World Meteorological Organization to synthesize on an ongoing basis developing peer-reviewed climate research. With the active participation of thousands of scientists worldwide, the IPCC has released four major assessments of climate science since 1990, each relying on peer-reviewed work. The IPCC assessments have reported increasing certainty about the threat and causes of climate change. The IPCC's general finding that the emissions of greenhouse gases from human activities are warming the planet is also supported by the American Association for the Advancement of Science,[24] the American Geophysical Union,[25] the American Chemical Society,[26] the American Meteorological Society,[27] and 13 National Academies (including the United States' National Academy of Sciences).[28]

The most recent Fourth Assessment Report (AR4) was released by the IPCC in 2007. AR4 represents six years of work from over 1,200 authors who are leading experts in their respective fields. An additional 2,500 experts reviewed drafts of the report. AR4 Working Group I found that the level of carbon dioxide in the atmosphere "has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005."[29] Levels of methane, another greenhouse gas, have risen from 715 ppb to 1774 ppb. AR4 concluded that evidence of climate warming is now "unequivocal," and that it is very likely that human activities have caused "most of the observed increase in global average temperatures since the mid-20th century."

Within the range of temperatures that could result at the end of this century due to greenhouse gas emissions, the IPCC predicts that there will be "significant extinctions around the globe"; "widespread coral mortality"; loss of about 30% of global coastal wetlands; decreased productivity of all cereal crops at low latitudes

[22] McKinsey & Company, Unlocking Energy Efficiency in the U.S. Economy (July 2009). Can be accessed at: http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/us_energy_efficiency_full_report.pdf

[23] 1,000TH MAYOR—MESA, AZ MAYOR SCOTT SMITH SIGNS THE U.S. CONFERENCE OF MAYORS CLIMATE PROTECTION AGREEMENT. The United States Conference of Mayors. October 2, 2009. Can be accessed at: http://www.usmayors.org/pressreleases/uploads/1000signatory.pdf.

[24] http://www.aaas.org/news/releases/2007/0202ipcc.shtml.

[25] http://www.agu.org/sci_soc/policy/positions/climate_change2008.shtml.

[26] http://portal.acs.org/portal/fileFetch/C/WPCP_007661/pdf/WPCP_007661.pdf.

[27] http://www.ametsoc.org/POLICY/2007climatechange.html.

[28] http://www.nationalacademies.org/includes/G8Statement_Energy_07_May.pdf.

[29] IPCC, AR4, Working Group I, Summary for Policy Makers.

and a "substantial burden on health services" including malnutrition, diarrheal, cardio-respiratory, and infectious diseases.[30]

The IPCC's conclusions have been independently confirmed by the U.S. Global Change Research Program, a program established by Congress[31] consisting of scientific experts from 13 U.S. agencies, under the leadership of the White House Office of Science and Technology Policy. In June 2009 the Program published its report, Global Climate Change Impacts in the U.S. The report reached the following major conclusions:

1. Global warming is unequivocal and primarily human-induced. Global temperature has increased over the past 50 years. This observed increase is due primarily to human induced emissions of heat-trapping gases.

2. Climate changes are underway in the United States and are projected to grow. Climate-related changes are already observed in the United States and its coastal waters. These include increases in heavy downpours, rising temperature and sea level, rapidly retreating glaciers, thawing permafrost, lengthening growing seasons, lengthening ice-free seasons in the ocean and on lakes and rivers, earlier snowmelt, and alterations in river flows. These changes are projected to grow.

3. Widespread climate-related impacts are occurring now and are expected to increase. Climate changes are already affecting water, energy, transportation, agriculture, ecosystems, and health. These impacts are different from region to region and will grow under projected climate change.

4. Climate change will stress water resources. Water is an issue in every region, but the nature of the potential impacts varies. Drought, related to reduced precipitation, increased evaporation, and increased water loss from plants, is an important issue in many regions, especially in the West. Floods and water quality problems are likely to be amplified by climate change in most regions. Declines in mountain snowpack are important in the West and Alaska where snowpack provides vital natural water storage.

5. Crop and livestock production will be increasingly challenged. Many crops show positive responses to elevated carbon dioxide and low levels of warming, but higher levels of warming often negatively affect growth and yields. Increased pests, water stress, diseases, and weather extremes will pose adaptation challenges for crop and livestock production.

6. Coastal areas are at increasing risk from sea-level rise and storm surge. Sea-level rise and storm surge place many U.S. coastal areas at increasing risk of erosion and flooding, especially along the Atlantic and Gulf Coasts, Pacific Islands, and parts of Alaska. Energy and transportation infrastructure and other property in coastal areas are very likely to be adversely affected.

7. Risks to human health will increase. Harmful health impacts of climate change are related to increasing heat stress, waterborne diseases, poor air quality, extreme weather events, and diseases transmitted by insects and rodents. Reduced cold stress provides some benefits. Robust public health infrastructure can reduce the potential for negative impacts.

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[30] IPCC, AR4, Working Group II, Summary for Policy Makers.
[31] Global Change Research Act of 1990, P.L. 101–606, 104 Stat. 3096 (Nov. 16, 1990).

8. Climate change will interact with many social and environmental stresses. Climate change will combine with pollution, population growth, overuse of resources, urbanization, and other social, economic, and environmental stresses to create larger impacts than from any of these factors alone.

9. Thresholds will be crossed, leading to large changes in climate and ecosystems. There are a variety of thresholds in the climate system and ecosystems. These thresholds determine, for example, the presence of sea ice and permafrost, and the survival of species, from fish to insect pests, with implications for society. With further climate change, the crossing of additional thresholds is expected.

10. Future climate change and its impacts depend on choices made today. The amount and rate of future climate change depend primarily on current and future human-caused emissions of heat-trapping gases and airborne particles. Responses involve reducing emissions to limit future warming, and adapting to the changes that are unavoidable.[32]

In considering these impacts, it is important to note that GHG gases remain in the atmosphere for long time periods. Because of the long lifetime of GHGs in the atmosphere and the tremendous amount of physical inertia in the climate system, we will be unable to avert or reverse severe climate impacts if we wait until we observe those impacts. The current levels of greenhouse gases, for example, commit us to an increase of at least another 1–1.6°F of warming, even if we could stop emitting GHGs tomorrow. Similarly, the rise of sea levels in response to emissions of GHGs will continue for hundreds of years as the heat from climate change slowly mixes through the ocean. Therefore, by the time we observe a particular projected impact, it may already be too late to avert or reverse that impact.

In summary, both the U.S. and international bodies charged with evaluating the science of climate change have concluded that the science overwhelmingly establishes the threat posed by human-induced climate change and the urgent need to act now to avert it.

PROTECTING NATIONAL SECURITY

Unchecked climate change threatens vital U.S. national security interests. As Admiral Dennis McGinn, U.S. Navy (Ret.) and member of the Center for Naval Analysis' Military Advisory Board, testified before the Committee: "American's current energy posture constitutes a serious threat to our national security, militarily, diplomatically, and economically."[33] Mr. McGinn's warnings were echoed in testimony of The Honorable John Warner, former Republican Senator and member of the EPW Committee, who served as Secretary of the Navy under President Nixon, and Kathleen Hicks, Deputy Undersecretary of Defense for Strategy, Plans, and Forces, U.S. Department of Defense. Drew Sloan, an infantry officer who served in both Iraq and Afghanistan, further stated, "I lead soldiers

[32] *http://downloads.globalchange.gov/usimpacts/pdfs/executive-summary.pdf,* Global Climate Change Impacts in the United States, U.S. Global Change Research Program (2009). Similar unequivocal conclusions were made in reports published by the Program in 2007 and 2008, under the Administration of President George W. Bush. See *http://www.globalchange.gov/publications/reports/scientific-assessments/saps.*

[33] Testimony of Vice Admiral Dennis McGinn before the Senate Committee on Environment and Public Works, "Legislative Hearing on S. 1733, Clean Energy Jobs and American Power Act," October 28, 2009.

on the ground in hostile situations and my experiences there have given me an appreciation for what our fighting men and women will face in the future if we do not act decisively against climate change."

The Center for Naval Analysis Corporation (CNA), a non-profit research organization dedicated to solving national security, defense, and a broader range of public interest issues, has published two reports entitled National Security and the Threat of Climate Change and Powering America's Defense: Energy and the Risks to National Security.[34] The reports conclude that, unchecked, climate change will threaten U.S. national security by amplifying the conditions for political instability, mass migration, and threatening America's military infrastructure and energy security.[35] The military advisory board that oversaw these reports was comprised of a distinguished panel of retired military officers from all service branches.

Civil unrest and political instability caused by the extreme weather and ecological conditions associated with climate change could "disrupt our way of life and force changes in the way we keep safe and secure."[36] Climate change has the potential to create more frequent and intense natural and humanitarian disasters due to flooding, droughts, disease, and crop failure.[37] Climate change could lead to competition for scarce natural resources and "exacerbate the stresses which may lead to conflict."[38] Moreover, lack of basic human needs like water and food will force the movement of people, both within their own borders and internationally. These conditions would increase the potential for failed states, and thus the growth of global terrorism. Increases in weather disasters, such as hurricanes, will also stimulate migrations to the U.S.[39] For example, storm damage and sea level rise in the Caribbean islands could contribute to an increase in the flow of immigrants into the U.S.[40] Such outcomes will have security consequences for the U.S. because it is "difficult to evaluate U.S. impacts without doing so elsewhere."[41]

In addition to these indirect risks to national security, there are also direct impacts on U.S. military infrastructure and operations. According to the National Intelligence Council, "the demands of . . . potential humanitarian responses may significantly tax U.S. military transportation and support force structures, resulting in a strained readiness posture and decreased strategic depth for combat operations."[42] On top of humanitarian and disaster relief, the U.S. military will also need to defend the Arctic and its resources

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[34] www.cna.org.

[35] National Security and the Threat of Climate Change, The CNA Corporation, 2007, page 6.

[36] National Security and the Threat of Climate Change, The CNA Corporation, 2007, page 6.

[37] Testimony of Vice Admiral Dennis McGinn before the Senate Committee on Environment and Public Works, "Legislative Hearing on S. 1733, Clean Energy Jobs and American Power Act," October 28, 2009.

[38] Testimony of Kathleen Hicks before the Senate Committee on Environment and Public Works, "Legislative Hearing on S. 1733, Clean Energy Jobs and American Power Act," October 28, 2009.

[39] Purvis, N, and J. Busby, The Security Implications of Climate Change for the UN System, ECSP Report, Issue 10 (2004).

[40] Campbell, Kurt M. et al., The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change, November 2007, page 56.

[41] Id.

[42] Testimony of Dr. Thomas Fingar before House Permanent Select Committee on Intelligence, "National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030," June 25, 2008.

undersea, due to melting of the Arctic ice.[43] To prepare for—or avoid—such impacts, the Pentagon and State Department have incorporated the national security implications of climate change in their long term strategic planning, the Quadrennial Defense Review and Quadrennial Diplomacy and Development review, respectively.[44]

Dependence on foreign oil weakens international leverage, undermines foreign policy objectives, and entangles America with unstable regimes.[45] In 2008, the U.S. spent $386 billion dollars to import oil, and much of this money went to countries with regimes hostile toward U.S. interests.[46] Economic stability is critical to our national security, and reliance on fossil fuel markets that have experienced wild swings constrict the economy in the short-term and undermine long-term strategic planning.[47]

Included in the CNA's recommendations for mitigating the impacts of climate change is a call for the U.S. to commit to both a national and international policy that will stabilize climate change at levels that will avoid significant security impacts. In addition, to reduce our military infrastructure and energy security risk, CNA believes that the Department of Defense should increase energy efficiency in operations where troops are engaged, transform use of energy at installations via smart grid technology and electrification of its vehicle fleet, and expand adoption of distributed and renewable energy generation at its installations.[48]

Clearly, climate change can be regarded as a "threat multiplier" that will result in increased demands and stresses on the U.S. and the world.[49] Addressing global climate change effectively is critically important to protecting America's national security.

THE PATH TO AVOIDING SEVERE CLIMATE CHANGE

The Act achieves reductions by placing a steadily declining cap on carbon pollution, reaching an 83 percent reduction below 2005 levels by 2050, and calling for a 20 percent reduction by 2020. Importantly, the Act also provides for periodic review of the emissions targets by the National Academy of Sciences, including assessment of whether the targets need to be revised to provide sufficient protection.

The bill accomplishes these goals through a pollution reduction program that covers less than 2% of American businesses and keeps American industry competitive during the transition to a new energy economy, while preserving the important functions of the Clean Air Act in the area of carbon pollution reduction.

The system applies only to the largest polluters in the country—initially around 7,400 facilities that will account for 86 percent of

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[43] National Security and the Threat of Climate Change, The CNA Corporation, 2007, page 38.
[44] Testimony of Kathleen Hicks before the Senate Committee on Environment and Public Works, "Legislative Hearing on S. 1733, Clean Energy Jobs and American Power Act," October 28, 2009.
[45] Powering America's Defense: Energy and the Risks to National Security, The CNA Corporation, 2009, page 1.
[46] Testimony of Kathleen Hicks before the Senate Committee on Environment and Public Works, "Legislative Hearing on S. 1733, Clean Energy Jobs and American Power Act," October 28, 2009.
[47] Powering America's Defense: Energy and the Risks to National Security, The CNA Corporation, 2009, page 11.
[48] Powering America's Defense: Energy and the Risks to National Security, The CNA Corporation, 2009, page ix.
[49] National Security and the Threat of Climate Change, The CNA Corporation, 2007, page 44.

U.S. carbon pollution by 2020.[50] Over ninety-eight percent of American businesses, including farmers, are not covered by this program. The market-based program also provides necessary flexibility. If a company needs more time to clean up its carbon pollution, it can pay for the right to keep polluting. Alternatively, if a business can decrease pollution quickly and affordably, it will be rewarded financially.

The bill also ensures that small businesses, farmers and ranchers are not unduly burdened. The bill does not cover any agricultural enterprise or any small business that emits less than 25,000 tons of carbon-based pollutants per year. This 25,000 ton cut-off is equivalent to the carbon pollution of 130 railway cars of coal, 2,300 homes, 4,600 cars, or 58,000 barrels of oil.

Delayed emission reductions significantly constrain the opportunities to achieve lower stabilisation levels and increase the risk of more severe climate change impacts.[51] Because of the long lifetime of GHGs in the atmosphere, delayed action will commit all countries to moderate to high climate risks, regardless of actions they may seek to take at a later date.

TECHNOLOGIES ARE AVAILABLE TODAY TO COMBAT GLOBAL WARMING AND SPUR ECONOMIC GROWTH

U.S. companies and researchers have led the way in developing a broad spectrum of breakthrough technologies enabling substantial emissions reductions now. Many studies have identified and discussed the numerous emissions reduction technologies and practices that are presently available. In addition, a study by McKinsey and Company found that significant emissions reductions could be achieved from energy efficiency measures.[52]

The Advanced Coal Technology Work Group convened by EPA reported in January that:

> [W]idespread commercial deployment of [advanced coal and CCS] technologies likely will not occur without legislation that establishes a significant long-term market driver. National mandatory GHG reduction legislation, for example, can provide a carbon price signal that would encourage the widespread deployment of large-scale carbon dioxide capture and sequestration systems. It is critical that any national policy should include provisions that prioritize and encourage early deployment of [advanced coal technology]—particularly CCS.[53]

A July 2009 analysis by The Climate Group, an international coalition of leading organizations and experts, concluded that short-term targets are achievable by focusing on energy efficiency, deforestation and existing renewable and nuclear technologies. Long-term targets require a price on carbon and investment and scaling up of known and viable, but not yet commercialized, technologies. "Innovation and technology will be essential to provide the answers

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[50] See Congressional Budget Office, cost estimate for S. 1733, Clean Energy Jobs and American Power Act; available at: *http://cbo.gov/ftpdocs/108xx/doc10864/s1733.pdf*

[51] IPCC AR4 Synthesis Report.

[52] McKinsey & Company, Unlocking Energy Efficiency in the U.S. Economy (July 2009). Can be accessed at: http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/us_energy_efficiency_full_report.pdf

[53] http://www.epa.gov/air/caaac/coaltech.html.

to climate change, energy security and economic growth. The solutions are achievable, affordable and realistic but will require concerted effort and international cooperation to be successfully executed." [54]

For many clean energy technologies, achieving broad market adoption can require substantial capital investments. The Committee heard testimony from many experts regarding the market framework and certainty that will be a necessary prerequisite to the private sector investment that is needed. The bill provides this certainty, establishing a long term reduction path (and therefore market signal) and a framework that includes approximately 86% of our economy's global warming emissions in a single comprehensive pollution reduction program.

The bill also provides major financial incentives supporting the widespread adoption of these technologies. It has been estimated that the allocation and auction of allowances under the bill could generate tens of billions of dollars annually that will be dedicated to funding of such green technology deployment.

THE COST OF INACTION

Failing to effectively avert climate change would likely cause major adverse economic impacts. The U.S. Global Change Research Program reported in July 2009 that:

> Climate changes are underway in the United States and are projected to grow. Climate-related changes are already observed in the United States and its coastal waters. These include increases in heavy downpours, rising temperature and sea level, rapidly retreating glaciers, thawing permafrost, lengthening growing seasons, lengthening ice-free seasons in the ocean and on lakes and rivers, earlier snowmelt, and alterations in river flows. These changes are projected to grow.[55]

In 2006 the Stern Review on the Economics of Climate Change, authored by the former Chief Economist of the World Bank Sir Nicholas Stern, concluded that the impacts of climate change would total at least 5 percent of global GDP each year and could be as high as 20 percent of GDP or more.[56] Other analyses of the economic impacts of four of the most significant categories of these impacts—hurricane damage, real estate losses, energy costs and water costs—concluded that by 2025, those impacts would cost 1.36 percent of GDP or $271 billion, and by 2100 those impacts would cost 1.84 percent of GDP, or $1.9 trillion.[57]

Nonpartisan analyses of S. 1733, and of its House counterpart, H.R. 2454, the American Clean Energy and Security Act (ACES), have concluded that the costs of the pollution reduction and investment program will be very modest. The Environmental Protection Agency (EPA) estimated that H.R. 2454 would cost an average fam-

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[54] "Breaking the Climate Deadlock/Technology for a Low Carbon Future," The Climate Group, July 2009. Available at: *http://www.theclimategroup.org/assets/resources/Technology_for_a_low_carbon_future_report.pdf.*

[55] *http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts;* U.S. Climate Change Science Program, Global Climate Change Impacts in the United States (Analyses of the Effects of Global Climate Change on the U.S. now, and into the future).

[56] *http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/media/4/3/Executive_Summary.pdf.*

[57] http://www.nrdc.org/globalwarming/cost/cost.pdf.

ily between $80 and $111 a year and estimated that S. 1733 would have similar costs.[58] At the same time, the EPA and EIA analyses show median household income rising $4,500 to $5,500 per year, relative to 2009 levels, far outweighing any increased costs of climate legislation.[59]

In addition, the bill invests emissions allowances and allowance value in a number of ways designed to further protect U.S. consumers and workers. These include:

- Rebates for low- and moderate-income consumers on their energy bills.
- A market stability fund to protect consumers and businesses from price volatility. This mechanism ensures that, even as the energy economy changes, customers will experience stable, affordable prices.
- Support for strong policing measures to establish marketplace accountability and ensure the new carbon marketplace is transparent, fair, and accountable.
- Billions of dollars in investment for the clean, efficient, and renewable use of energy and the deployment of twenty-first century energy technologies.
- Worker training for new industries, including new programs at post-secondary institutions.
- Support for energy-intensive, trade-exposed industries to ensure that U.S. manufacturing remains competitive.

ECONOMIC ANALYSIS

EPA conducted and provided to the Committee a synthesis report that examined the key differences between S. 1733 and H.R. 2454 and analyzed the impacts on the cost estimates resulting from each of those key differences, individually and in the aggregate. Earlier in 2009, the EPA, the Congressional Budget Office (CBO) and the Energy Information Administration (EIA) modeled potential economic impacts of H.R. 2454, the American Clean Energy and Security Act (ACES), which is very similar to S. 1733.[60] Because of the similarity between the two bills, EPA concluded with a very high degree of confidence that an additional modeling analysis of S. 1733 would not render meaningful new information or significantly different results. As EPA explained in its report: "For the most part the differences between the bills result in relatively small differences in estimated costs and may even cancel each other out."[61]

During committee consideration of S. 1733, David McIntosh, EPA Assistant Administrator for the Office of Congressional and Intergovernmental Relations, described the extensive analysis and modeling that laid the foundation for EPA's report on S. 1733: "It relied on over 50 modeled scenarios. . . . And all of those modeling efforts rely themselves on a large body of literature and analysis that, if you put it all together, amounts to over 340,000 pages."[62]

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[58] *http://www.epa.gov/climatechange/economics/pdfs/EPA_S1733_Analysis.pdf.*

[59] *http://www.epa.gov/climatechange/economics/pdfs/HR2454_Analysis.pdf, http://www.eia.doe.gov/oiaf/servicerpt/hr2454/.*

[60] *http://www.cbo.gov/ftpdocs/102xx/doc10262&/hr2454.pdf; http://www.epa.gov/climatechange/economics/pdfs/HR2454_Analysis.pdf; and http://www.eia.doe.gov/oiaf/servicerpt/hr2454/.*

[61] U.S. EPA, "Economic Impacts of S. 1733: The Clean Energy Jobs and American Power Act of 2009," Oct. 23, 2009.

[62] Testimony of David McIntosh before Senate Committee on Environment and Public Works, Nov. 3, 2009.

The Committee had much more analysis from EPA with respect to S. 1733 than the House Energy and Commerce Committee had available when it considered H.R. 2454 earlier this year. On May 21, 2009, after a 4-day markup, the House Energy and Commerce Committee favorably reported an amended version of H.R. 2454 based on a summary of the manager's amendment from EPA.

Finally, it is important to note that at the time of the markup S. 1733 did not constitute the complete piece of legislation. Rather, S. 1733 would be considered and modeled with reported bills from other Committees, including S. 1462, from the Committee on Energy and Natural Resources, before final legislation will be considered on the Senate floor.

DISCUSSION OF PROVISIONS AND SECTION-BY-SECTION ANALYSIS

Section 1. Short title; Table of contents

Section 1 provides that the Act may be cited as the "Clean Energy Jobs and American Power Act".

Section 2. Findings

Describes the impacts of climate change and the benefits of transitioning to a clean energy economy.

Discussion

The most central findings of the Act are: (1) the United States can take back control of the energy future of the United States, strengthen economic competitiveness, safeguard the health of families and the environment, and ensure the national security, of the United States by increasing energy independence; (2) efficiency in the energy sector also represents a critical avenue to reduce energy consumption and carbon pollution, and those benefits can be captured while generating additional savings for consumers; (3) substantially increasing the investment in the clean energy future of the United States will provide economic opportunities to millions of people in the United States and drive future economic growth in this country; (4) if unchecked, the impact of climate change will include widespread effects on health and welfare, including—increased outbreaks from waterborne diseases; more droughts; diminished agricultural production; severe storms and floods; heat waves; wildfires; and a substantial rise in sea levels, due in part to—melting mountain glaciers, shrinking sea ice and thawing permafrost.

Section 3. Economy-wide emission reduction goals

This section establishes targets for reducing greenhouse gas (GHG) emissions to:

97% of 2005 emissions in 2012
80% of 2005 emissions in 2020
58% of 2005 emissions in 2030
17% of 2005 emissions in 2050

Section 4. Definitions

This section includes definitions of terms used throughout the Act

DIVISION A—AUTHORIZATIONS FOR POLLUTION REDUCTION, TRANSITION, AND ADAPTATION

Section 101. Structure of Act

Describes the authorizations included in the bill, including those that receive an allocation of allowances under Division B.

Section 102. Requirements relating to Federal advisory committees

This section requires any scientific advisory panel convened pursuant to this Act and the members of such panel to meet standards of scientific integrity, provide independent advice, and avoid or disclose conflicts of interest. The section also requires the public disclosure of the charter, proceedings and membership of all advisory committees.

Section 103. Voluntary renewable energy markets

Includes findings describing the accomplishments of voluntary renewable energy markets and states that it is the policy of the United States to continue to support the growth of these markets.

TITLE I—GREENHOUSE GAS REDUCTION PROGRAMS

SUBTITLE A—CLEAN TRANSPORTATION

Section 111. Emission standards

Amends Title VIII of the Clean Air Act to require EPA to establish greenhouse gas emission standards for new heavy-duty vehicles and engines, and for nonroad vehicles and engines.

Section 112. Greenhouse gas emission reductions through transportation efficiency

Section 112 adds a new section to the Clean Air Act, Section 831, under which State and local transportation agencies will incorporate consideration of transportation strategies for reducing greenhouse gas emissions into their transportation plans in order to be eligible for the transportation planning, transit, and competitive transportation grants created in this Act.

Section 113. Transportation greenhouse gas emission reduction program grants

Section 113 adds a new section to the Clean Air Act, Section 832, which creates a planning grant program for MPOs and a competitive grant program for States and eligible MPOs to help implement emission reduction efforts described in Section 112 above.

Section 114. SmartWay Transportation Efficiency Program

Section 114 adds a new section to the Clean Air Act, Section 822, which creates statutory authority for the SmartWay Transportation Efficiency Program, expanding the current EPA SmartWay Transport Partnership.

Discussion

According to the Environmental Protection Agency's "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990—2007" the transportation sector is responsible for 28% of the greenhouse gas emissions in the United States, second only to electricity genera-

tion.[63] Emissions from the transportation sector are also growing much faster than many other sectors, representing 47% of the increase in total greenhouse gas emissions in the United States between 1990 and 2006.[64] Transportation is clearly a significant part of the climate problem, and must be part of the solution.

The bill takes significant steps to reduce greenhouse gas emissions from the transportation sector. The legislation amends the Clean Air Act to require the EPA Administrator, in consultation with the Secretary of Transportation, to establish national greenhouse gas emissions reduction goals and develop a variety of tools (including emission models, methodologies and information as to best practices) to be used by States and regions when they develop transportation sector greenhouse gas emissions reduction targets and plans. The authority conferred upon EPA under the new section 831(a) of the Clean Air Act requires consultation and interaction with the Secretary of Transportation and maintains the Department of Transportation's (USDOT) role in transportation planning. Under this subtitle, USDOT (in consultation with EPA) will promulgate regulations regarding modeling and measurement of greenhouse gas emissions and make appropriate updates to transportation planning regulations to facilitate an effective integration of greenhouse gas emission reduction into transportation planning.

This subtitle allows States and participating metropolitan planning organizations (MPOs) to develop their own targets and strategies for reducing greenhouse gas emissions from the transportation sector. Section 134(k) of this subtitle requires that the setting of targets and selection of strategies be customized to the jurisdiction as the circumstances facing each jurisdiction will be different and standardized plans are unlikely to be effective.

The policy, scope of planning, and consultation sections of existing federal-aid highway and transit requirements are amended to introduce a stronger emphasis on energy consumption, greenhouse gas emissions, and sustainable environments. In addition, a greater role in the long-range planning process is provided for State and local agencies responsible for transportation, public transportation, air quality and housing as well as Indian tribes and public health agencies, as appropriate. This subtitle does not change the longstanding roles for the Federal government, State governments, and MPOs under Titles 23 and 49.

The goal of the new planning requirements in this Subtitle is to foster performance-based planning by States and MPOs that explicitly takes into account greenhouse gas emission reductions. Such practices benefit from the adoption of goals that are built upon consensus at the community and State levels. This subtitle does nothing to preclude citizen involvement in planning, or civil actions under NEPA at the project level. Section 112(d) clarifies that citizen lawsuits shall not be applicable to the provisions of this Act that relate to the setting of greenhouse gas emission reduction targets nor the development of plans to reduce greenhouse gas emissions.

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[63] U.S. Environmental Protection Agency, "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007," at ES–14 (April 15, 2009).

[64] U.S. Environmental Protection Agency, Regulatory Announcement, "EPA and NHTSA Propose Historic National Program to Reduce Greenhouse Gases and Improve Fuel Economy for Cars and Trucks," Sept. 2009. Available at: *http://www.epa.gov/otaq/climate/regulations/420f09047.pdf*.

Scenario analyses, as incorporated into the new planning provisions, are intended as procedural planning tools to be undertaken before the formulation of targets and strategies, not as a project selection mechanism. Furthermore, the minimum planning requirements outlined for States and MPOs are intended to indicate that a State or MPO is able to take additional steps if it so chooses. It is not intended that USDOT add minimum requirements to this list through administrative action or require the use of a particular technique.

In addition to comprehensive new planning requirements, this subtitle creates an incentive for action by providing planning funds to MPOs, discretionary grants for States and MPOs to use in implementing their plans, and formula grants to public transportation agencies, all of which will be used to reduce greenhouse gas emissions from the transportation sector. The funding provided rewards MPOs and States for setting their own targets and strategies to reduce emissions. If a State or MPO's efforts do not meet the requirements of this subtitle or are not approved by the Secretary, they are not eligible for grants.

The goal of this Subtitle is to foster performance-based planning by States and MPOs that explicitly takes into account greenhouse gas emission reductions. Such practices benefit from the adoption of goals that are built upon consensus at the community and State levels. This subtitle does nothing to preclude citizen involvement at the plan level or civil actions under NEPA at the project level. Section 112(d) clarifies that citizen lawsuits shall not be applicable to the provisions of this Act that relate to the setting of greenhouse gas emission reduction targets nor the development of plans to reduce greenhouse gas emissions.

SUBTITLE B—CARBON CAPTURE AND SEQUESTRATION

Section 121. National strategy

Requires the EPA Administrator, in consultation with the heads of other relevant Federal agencies, to submit to Congress a report setting forth a unified and comprehensive strategy to address the key legal and regulatory barriers to the commercial-scale deployment of carbon capture and sequestration.

Section 122. Regulations for geological sequestration sites

Amends the Clean Air Act to require the Administrator to establish a coordinated approach to the certification and permitting of sites where geologic sequestration of carbon dioxide will occur. Requires the EPA Administrator to promulgate regulations to minimize the risk of escape to the atmosphere of carbon dioxide injected for geologic sequestration and details the requirements of such regulations.

Section 123. Studies and reports

Requires the EPA Administrator to establish a multi-stakeholder task force and conduct a study of the legal framework for geologic sequestration sites and activities.

Section 124. Performance standards for new coal-fueled power plants

Amends the Clean Air Act to establish performance standards for new coal-fueled power plants permitted in 2009 or thereafter. Describes eligibility criteria, applicable emission standards, and the schedule upon which such standards must be met. Plants permitted in 2020 or thereafter are required to meet specified standards once they begin operations. Plants permitted from 2009–2020 are required to meet the specified standard after 10 gigawatts of commercial deployment is achieved but no later than January 1, 2020.

Requires the Administrator in consultation with the Department of Energy to submit a report to Congress not later than June 30, 2017 that includes a finding, based on a review of the status of commercial deployment of carbon capture and sequestration technology on whether the date for compliance with the performance standards should be maintained or extended to January 1, 2022.

Section 125. Carbon capture and sequestration demonstration and early deployment program

Establishes a program for the demonstration and early deployment of carbon capture and sequestration (CCS) technologies. Authorizes fossil fuel-based electricity distribution utilities to hold a referendum on the establishment of a Carbon Storage Research Corporation program for the demonstration and early deployment of carbon capture and sequestration (CCS) technologies. If approved by entities representing two-thirds of the nation's fossil fuel-based delivered electricity, the Corporation would be operated as a division or affiliate of the Electric Power Research Institute and would assess power distribution fees totaling approximately $1 billion annually for ten years, to be used by the Corporation to fund the large-scale demonstration of CCS technologies in order to accelerate the commercial availability of those technologies.

Discussion

Coal-fired plants generate almost a third of U.S. CO_2 emissions, equal to the emissions from all of our cars, trucks, and buses combined.[65]

The greenhouse gas emissions from burning coal must be addressed in order to avert the worst consequences of global climate change. Technology for carbon capture and sequestration (CCS) can allow the continued use of coal with greatly reduced impact on the climate. CCS involves the physical capture of CO_2 at power plants, compressing the gas into a liquid, and injecting the CO_2 into geological formations.

The technologies that are needed to implement CCS exist today and have been commercially deployed in other industries, such as in oil and gas production. Despite the availability of these technologies, however, no full-scale CCS project has yet been implemented at a coal-fired power plant, in large measure due to the substantial capital investment required at scale.

[65] U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2007 (April 15, 2009) at Tables 2–1 2–13 (online at http://www.epa.gov/climatechange/emissions/downloads09/InventoryUSGhG1990–2007.pdf).

S. 1733 provides significant incentives for the development and early demonstration of CCS technologies. For example, the bill invests up to 5% of allowances in carbon capture and sequestration (CCS) projects, estimated to equal more than $3 billion per year by 2020, and provides advanced payments of emission allowances to reward early actors who pledge specific reductions through the implementation of CCS technology on new or retrofitted plants. The bill also authorizes the private sector to establish a ten-year, $10 billion program for the development and early demonstration of CCS technologies. Moreover, S. 1733 also provides an important indirect incentive for CCS, by putting a price on CO_2 emissions.

Because of the very large volumes of CO_2 that will need to be sequestered, the most promising CO_2 storage potential is in geological formations. However, the bill supports potential technologies that can safely sequester CO_2. For example, the incentives in the bill for CCS will apply to CCS technologies that capture CO_2 emissions from power plant flue gas and combines it with other materials to produce cement, aggregate, or other building materials.[66]

Currently, the lack of market certainty has prevented significant investment in either new pulverized coal or new CCS coal plants. For example, 54 percent of coal capacity ordered since 2000 has been canceled or put on hold in the last two years, in part because of uncertainties concerning the enactment of climate legislation, which most in the private sector view as likely or inevitable.[67] Deployment of the first 5–10 commercial scale CCS projects will facilitate large-scale deployment, reduce costs, and lay the groundwork for deployment of CCS plants.

SUBTITLE—NUCLEAR AND ADVANCED TECHNOLOGIES

Section 131. Findings and policy

Provides Congressional findings related to the role of nuclear power as an energy source. Establishes a policy of promoting a safe and clean nuclear energy industry, through reductions in financial and technical barriers to construction and operations incentives for the development of a well-trained workforce and the growth of safe domestic nuclear and nuclear-related industries.

Section 132. Nuclear worker training

Establishes a grant program, administered by EPA, to provide assistance for training of workers that will be essential for the growth of safe domestic nuclear and nuclear-related industries.

Section 133. Nuclear safety and waste management programs

Establishes programs to provide grants and other assistance for research projects that seek to develop new technologies for nuclear waste management.

Discussion

The Committee recognizes that nuclear energy will play an important role in meeting emissions reductions goals and in transitioning to a clean energy economy. The development of nu-

[66] Testimony of Brent Constantz, Ph.D, CEO of Calera Corporation, before Senate Appropriations Committee, Subcommittee on Energy and Water Development, May 6, 2009.
[67] http://www.eenews.net/eenewspm/2008/02/19/3/.

clear power requires well-trained workers and a safe and effective means for disposal of spent nuclear waste. Subtitle C seeks to address these issues, with an explicit policy of promoting a safe and clean nuclear energy industry, and by establishing grant programs to train workers and invest in research and development on nuclear waste management technologies.

SUBTITLE D—WATER EFFICIENCY

Section 141. WaterSense

Authorizes EPA's WaterSense program, a voluntary program for labeling water-efficient high-performance products and services. Provides the same type of labeling for water-efficient products and services as currently in place for energy-efficient products under the Energy Star program.

Section 142. Federal procurement of water-efficient products

Directs Federal agencies to make cost-effective water-efficient procurement decisions by purchasing WaterSense or Federal Energy Management Program certified products whenever possible.

Section 143. State residential water efficiency and conservation incentives program

Authorizes grants to eligible entities for programs offering incentives to consumers who purchase and install water-efficient products and services such as those labeled under WaterSense.

Discussion

This Subtitle promotes water efficiency measures. Climate change will continue to place extreme pressures on water resource availability and water quality throughout the United States—effects such as greater evaporation rates, earlier snowmelt, extended and extreme drought, water scarcity, extreme flooding, and water quality degradation are expected to occur at increasing rates.[68]

Between 1950 and 2000, the U.S. population nearly doubled while the public demand for water more than tripled.[69] Climate change impacts coupled with greater public demand for water make water efficiency measures, on both the federal and state level, paramount to ensuring adequate water supplies.

This Subtitle authorizes the WaterSense program and other similar water efficiency measures. Not only does water efficiency help to protect the future of our nation's water supply, but it also reduces pollution and decreases energy consumption by contributing to healthy wetlands, reducing the need to construct additional water and wastewater treatment facilities, and eliminating excessive surface water withdrawals.[70]

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[68] National Association of Clean Water Agencies, "Confronting Climate Change: An Early Analysis of Water and Wastewater Adaptation Costs," October 2009, 1–1. Available at: *http://www.nacwa.org/images/stories/public/2009–10–28ccreport.pdf.*

[69] http://www.epa.gov/WaterSense/water/why.htm.

[70] http://www.epa.gov/WaterSense/water/save/env__benefits.htm.

SUBTITLE E—MISCELLANEOUS

Section 151. Office of Consumer Advocacy

Establishes an Office of Consumer Advocacy within the Federal Energy Regulatory Commission to identify and defend the consumer interest in proceedings before the Commission.

Section 152. Clean technology business competition grant program

Provides for grants by EPA to nonprofit organizations for competitive programs supporting start-up businesses in the areas of energy efficiency, renewable energy, air quality, water quality and conservation, transportation, smart grid, green buildings, and waste management.

Section 153. Product carbon disclosure program

Requires EPA to conduct a study regarding effectiveness of a voluntary product carbon disclosure and labeling program, to implement such a program based on the results of the study, and to report to Congress.

Section 154. State recycling programs

Requires EPA to establish a state recycling and reuse program and develop analyses and methodologies to optimize reductions of greenhouse gas emissions through recycling and reuse. Provides that funds distributed by States under the Act to carry out these programs be allocated in minimum proportions among county and municipal programs, eligible recycling facilities, and eligible manufacturing facilities.

Discussion

Preventing and recycling solid waste helps not only to better manage the nation's waste stream, it also provides an important tool in reducing greenhouse gas emissions. Waste prevention and recycling can reduce methane emissions—a potent greenhouse gas—from landfills. It can also provide a steady source of organic material that can be beneficially reused.

According to the Environmental Protection Agency, producing products from virgin materials typically involves more energy than producing the same products from recycled materials. Reusing intact products, meanwhile, uses the least amount of energy. Reusing materials and products, then, can increase energy efficient production and save manufacturers and consumers money, while reducing greenhouse gas emissions.

Section 155. Supplemental agriculture, abandoned mine lands, and forestry greenhouse gas reduction and renewable energy program

Establishes a new program to provide assistance to agriculture and forestry landowners and to entities seeking to clean up abandoned mine lands for projects that reduce greenhouse gases or sequester carbon. Establishes a research program for the development and deployment of renewable energy technologies in the agricultural and forestry sectors.

Section 156. Economic development climate change fund

Authorizes the Economic Development Administration to provide up to $50 million per year in technical assistance and grants for projects that promote green economic development in distressed communities.

This section amends Title II of the Public Works and Economic Development Act of 1965 to authorize a program through which the Secretary of Commerce may provide technical assistance and grants for projects that: (1) promote energy efficiency to enhance economic competitiveness; (2) increase the use of renewable energy to support economic development; (3) develop conventional energy resources to produce alternative transportation fuels, electricity and heat; (4) develop energy efficient or environmentally sustainable infrastructure; (5) promote environmentally sustainable economic development practices and models; (6) support development of energy efficiency and alternative energy development plans, studies or analysis.

The Federal share for projects funded under this program will be 80%, except that the Federal share used to supplement another Federal grant, loan or loan guarantee may be 100%. For each of fiscal years 2009 through 2013, $50 million is authorized for this program.

Discussion

This section will authorize the Economic Development Administration to provide grants, loans and loan guarantees aimed at both improving our environment and supporting job creation.

Section 157. Study of risk-based programs addressing vulnerable areas

Requires preparation of a report within two years assessing federal pre-disaster mitigation, emergency response and flood insurance policies and programs that affect areas vulnerable to the impacts of climate change, with strategies and recommendations.

Discussion

Federal policies relating to pre-disaster mitigation, emergency response and flood insurance programs will be critically important to efforts to minimize damage and loss of life resulting from increased hurricanes and other climate-related storms. U.S. Census Bureau data indicate that more than 35 million Americans live in coastal counties most threatened by hurricanes. Testimony provided by the Reinsurance Association of America stated that Gulf Coast and Atlantic Coast insured property exposure total approximately $9 trillion, and the U.S. insurance industry has reported more than $170 billion of hurricane related losses since 1988. Section 157 calls for a study and report analyzing key federal policies that will affect areas vulnerable to the impacts of climate change, including consistency with the State and tribal response and adaptation goals under the Act, and provide strategies and recommendations for improving those policies. The Committee expects that the study and report will identify significant opportunities for cost savings to the Federal Government, as well as lead to better preparation of coastal areas for climate-related events.

Section 158. Efficient buildings program

Provides assistance to owners of buildings for verifiable, additional, and enforceable improvements in energy performance.

SUBTITLE F—ENERGY EFFICIENCY AND RENEWABLE ENERGY

Section 161. Renewable energy

Directs EPA to establish a program to provide grants and other assistance to renewable energy projects in states with mandatory renewable portfolio standards.

Section 162. Advanced biofuels

Directs EPA to establish a program to provide grants to promote the production and use of advanced biofuels through research and development, planning, translation of new technologies into commercial use, and construction of appropriate facilities.

Section 163. Energy efficiency in building codes

Requires the EPA Administrator, or such other agency head as the President designates, to set a national goal for improvement in building energy efficiency, promulgate a rule establishing national energy efficiency building codes for residential and commercial buildings, and regularly report to Congress on progress in improving building efficiency.

Section 164. Retrofit for energy and environmental performance

Establishes the Retrofit for Energy and Environmental Performance Program to provide allowances to States to conduct cost-effective building retrofits. Provides that States may use local governments or other agencies or entities to carry out the work and may use flexible forms of financial assistance providing up to 50% of the costs of retrofits, with funding increasing in proportion to efficiency achievement. Provides additional assistance for the retrofitting of historic buildings. Directs the Administrator of EPA to establish standards and guidelines for the program, in consultation with the Secretary of Energy. Requires States to offer preferential access to at least 10% of dedicated program funding to public and assisted housing. Allows funding to be used to provide training to building staff relating to energy-efficient operations and maintenance of residential and nonresidential buildings. Nothing in this section would require a homeowner to audit or retrofit their home or authorize mandatory enforcement of building code requirements.

Section 165. Certified stoves program

This section directs the Environmental Protection Agency (EPA) to establish a program to assist in the replacement of older inefficient wood stoves or pellet stoves with cleaner burning units to improve air quality, including reductions in methane and carbon dioxide from improved combustion efficiency. It authorizes the Administrator to provide grants, incentives and loans for people who rely on wood as a source of heat.

Section 166. Renewable fuel standard

This section clarifies that advanced biofuels are included in the Renewable Fuels Standard by replacing the term "cellulosic

biofuel" with the term "Advanced Green Biofuel." Advanced Green Biofuel is defined to mean a fuel that is derived from renewable biomass and has lifecycle greenhouse gas emissions of at least 60% below the relevant baseline.

Section 167. Tree planting programs

This section authorizes a grant program through the Environmental Protection Agency to provide technical and financial assistance to plant trees around residential and commercial buildings, to reduce energy use and demand peaks.

Discussion: Energy efficiency

Increasing energy efficiency can help to reduce household and business costs, the need for new electricity generation and greenhouse gas and other pollution, while improving the reliability of energy supplies and the efficiency of manufacturing and other businesses. The programs authorized in sections 163, 164, 165 and 167 of this subtitle seek to build on and expand the nation's energy security, consumer savings, industrial competitiveness and job base by increasing energy efficiency. The increase in energy efficiency not only improves our national energy security, it can help to address global warming and environmental threats—while increasing our nation's competitiveness and transforming the way our country uses energy. Reduced energy demand can also help to reduce the strain on existing electricity systems, resulting in a more stable supply of power and less need for new fossil fuel burning power plants.

This subtitle places a focus on improving energy efficiency of residential and commercial buildings. According to the Department of Energy, the typical U.S. family spends roughly $1,900 a year on home utility bills. The Department notes that a large portion of the energy used in homes can be wasted. For example, uninsulated home heating air ducts can lose up to 60 percent of the heat in the air that they convey. Insulating these ducts can save homes money and reduce energy demand. Replacing an old air conditioner with a new, energy-efficient model reduces utility cooling bills by up to 50 percent. This can also save money on energy bills and reduce energy demand.[71]

According to the Department of Energy, the Nation's buildings sector accounts for roughly 40 percent of our energy use, 72 percent of our electricity consumption, and 34 percent of our nation's use of natural gas—and building-related energy costs were about $390 billion in 2006.[72] According to the Environmental Protection Agency, commercial buildings that have met the agency's Energy Star standards[73] are one-third more energy efficient than average U.S. office buildings and have annual energy bills that are 35 percent lower than the average building.[74] Data from the Energy Star pro-

[71] Energy Savers Booklet: Tips on Saving Energy and Money at Home. US Department of Energy. Available at http://www1.eere.energy.gov/consumer/tips/pdfs/energy_savers.pdf

[72] Buildings Energy Data Book, Sept. 2008, Tables 1.1.3 1.1.6, 3.1.1, 3.3.1, 4.1.5, 5.1.2, 5.3.1. Available at http://buildingsdatabook.eren.doe.gov/docs/DataBooks/2008_BEDB_Updated.pdf

[73] The Environmental Protection Agency's Energy Star Program promotes the use of energy efficient products and building designs.

[74] Summary of the financial benefits of Energy Star labeled buildings. US Environmental Protection Agency. Available at: http://www.energystar.gov/ia/partners/publications/pubdocs/Summary_of_the_Financial_Benefits_23June06_FINAL.pdf

gram shows that buildings that met the program requirements in 2008 resulted in a net savings of $5.3 billion, with 18.5 million metric tons of avoided greenhouse gas emissions.[75]

Retrofits, a major component of increasing energy efficiency, and the primary focus of the Retrofits for Energy and Environmental Performance program authorized in Section 164, provide new domestic job opportunities. Retrofitting existing homes requires jobs that cannot be exported and must be performed in communities across the nation. These jobs include installing insulation, new windows and new heating and cooling systems. Many of these jobs rely on existing skills used in the construction industry.

Discussion: Renewable fuels

According to the Environmental Protection Agency, transportation accounts for 28 percent of the nation's greenhouse gas emissions. Reducing our nation's dependence of foreign sources of petroleum to fuel our transportation sector strengthens our national security and promotes energy independence. The programs authorized in this subtitle promote domestic sources of biofuels that accomplish these goals while providing domestic sources of employment and reducing greenhouse gas emissions.

The advanced biofuel sector is on the cutting edge of science. The advanced green biofuel grant program and the modification of the term "cellulosic" biofuel in the renewable fuels standard recognize the rapid development of this technology and seek to promote these new fuel sources. The advanced green biofuel program provides the Environmental Protection Agency with maximum flexibility to help promote advanced biofuel development at each stage of production, focusing on fostering advanced green biofuels that are sustainably generated throughout the production cycle and that can use the nation's existing fuel delivery systems.

SUBTITLE G—EMISSION REDUCTIONS FROM PUBLIC TRANSPORTATION VEHICLES

Section 171. Short title

Section 172. State fuel economy regulation for taxicabs

Allows State and local governments to set emissions standards for fuel efficiency of taxi cabs at least as stringent as applicable Federal standards.

Section 173. State regulation of motor vehicle emissions for taxicabs

Amends the Clean Air Act to allow State and local governments to set emissions standards for emissions from taxi cabs at least as stringent as applicable Federal standards.

[75] Energy Star and Other Climate Protection Partnerships: 2008 Annual Report. US Environmental Protection Agency. Available at http://www.energystar.gov/ia/partners/publications/pubdocs/Annual%20Report__122309__to%20EPA__Web.pdf

SUBTITLE H—CLEAN ENERGY AND NATURAL GAS

Section 181. Clean energy and accelerated emission reduction program

Authorizes EPA to carry out a program to provide incentive payments for power generation projects that achieve reductions in greenhouse gases as compared to the electric utility sector average.

Section 182. Advanced natural gas technologies

Authorizes EPA to carry out a program to provide grants for research and development of advanced technologies, including carbon capture and sequestration, which reduce greenhouse gas emissions from natural gas-fueled electricity generation facilities.

Discussion

Natural gas will play an important role in reducing U.S. greenhouse gas emissions because it has by far the lowest carbon content of the fossils fuels. Natural gas can be used in power generation, transportation, and direct end use applications.[76] Using natural gas in the transportation sector can increase our national security by decreasing our use of oil—two thirds of which is foreign oil.

Recent developments in natural gas drilling technology have greatly increased estimated U.S. natural gas reserves. The Energy Information Agency forecasts that the U.S. production of natural gas from unconventional sources will increase from 47% of the U.S. total in 2007 to 56% in 2030.[77]

Increased production of natural gas, especially from unconventional sources where hydraulic fracturing is used or where production fluids cannot be re-injected into the formations, is not without risks to human health and the environment. In the Interior, Environment and Related Agencies Appropriations Act, 2010, Congress urged EPA to conduct a scientific, peer-reviewed study, including consultation with other federal agencies and appropriate State and interstate regulatory authorities, on the relationship between hydraulic fracturing and drinking water.[78]

Using more domestic natural gas will enhance our economic competitiveness. Higher demand for natural gas will create more U.S. jobs, and using domestic gas in lieu of imported oil would reduce our trade imbalance, keeping more of our energy dollars to invest at home instead of sending overseas. Natural gas can also be used to develop new, clean-energy technologies such as wind-gas hybrid electricity plants, carbon capture and sequestration, and natural gas transportation fuels. American engineered low-carbon technology innovations could be marketed to the rest of the world, helping to reduce worldwide CO_2 emissions and maintaining the United States' leadership in technology innovation.[79]

S. 1733 will encourage the use of natural gas for power generation by authorizing EPA to carry out a program under Section 181

[76] Testimony of Joel Bluestein, Senior Vice President, ICF International, before Senate Committee on Environment and Public Works, "Legislative Hearing on S. 1733, Clean Energy Jobs and American Power Act," Oct. 28, 2009.

[77] U.S. Department of Energy, Energy Information Agency, Annual Energy Outlook 2009 (March 2009) (online at *http://www.eia.doe.gov/oiaf/aeo/gas.html)*.

[78] H. Conf. Report 111–316 (Oct. 28, 2009), at 109.

[79] Testimony of John D. Podesta, President and CEO, Center for American Progress, before Senate Committee on Environment and Public Works, "Legislative Hearing on Clean Energy Jobs and American Power Act, S. 1733", Oct. 29, 2009.

to provide incentive payments for power generation projects that achieve reductions in greenhouse gases as compared to the electric utility sector average.

Section 182 of the bill will significantly accelerate the development of advanced natural gas technologies by authorizing EPA to provide grants for research and development of advanced natural gas technologies, including CO_2 capture and sequestration from natural gas-fired power plants.

TITLE II—RESEARCH

SUBTITLE A—ENERGY RESEARCH

Section 201. Advanced energy research

Authorizes EPA to carry out a program to provide grants to support research and development on innovative energy technologies that reduce US dependence on foreign energy sources and reduce greenhouse gas emissions.

Discussion

Increased funding for research on advanced energy technologies is critically important to achieving technological breakthroughs that will help the U.S. transition to a clean energy economy. The U.S. Government has a history of funding the basic research of technologies that have become central to our economy. Similarly, the basic research being conducted today will lead to the clean energy technologies of tomorrow. Federal research and sponsorship will be critically important to ensuring a substantial U.S. role in these industries. Section 201 creates a program that will direct appropriated funds to these vitally important research projects.

SUBTITLE B—DRINKING WATER ADAPTATION, TECHNOLOGY, EDUCATION, AND RESEARCH

Section 211. Effects of climate change on drinking water utilities

Requires EPA to establish and provide funding for a research program, to be conducted through a nonprofit water research foundation and sponsored by drinking water utilities, to assist utilities in adapting to the effects of climate change.

Discussion

This section directs funds to assist drinking water utilities in adapting to climate change impacts on our water and wastewater systems. Such impacts include extended and extreme drought, water scarcity and the need to develop new supplies, extreme flooding and sea level rise, costly energy and energy efficiency actions, and water quality degradation and increased treatment requirements.[80]

A recent study by the National Association of Clean Water Agencies estimates that drinking water utilities will require $325–$692 billion to address climate change through 2050.[81] Drinking water utilities will likely have to engage in costly adaptation strategies

[80] National Association of Clean Water Agencies, "Confronting Climate Change: An Early Analysis of Water and Wastewater Adaptation Costs," October 2009, 1–2, *http://www.nacwa.org/images/stories/public/2009-10-28ccreport.pdf*.

[81] Id. at 3–7.

to respond to climate change impacts including: increasing conservation to extend existing sources of water; learning to tap new water sources, such as seawater desalination, lower quality groundwater and wastewater reuse; increasing storage and conveyance to accommodate changes in the timing and intensity of precipitation and runoff; increasing wastewater treatment; addressing flooding damage, particularly in coastal areas; and creating water management portfolios that add flexibility and support sustainability of the water supply.[82]

Water and wastewater infrastructure planning operates within a 20- to 40-year timeframe, making timely action critical.[83] Adaptation responses identified must continue to include innovative approaches and cooperation among water-related organizations.[84] This section will provide additional funds to research adaptation strategies and build partnerships as drinking water utilities face increasing challenges in securing and sustaining our nation's water supply.

TITLE III—TRANSITION AND ADAPTATION

SUBTITLE A—GREEN JOBS AND WORKER TRANSITION

PART 1—GREEN JOBS

Section 301. Clean energy curriculum development grants

Authorizes the Secretary of Education to award grants, on a competitive basis, to eligible partnerships to develop programs of study focused on emerging careers and jobs in the fields of clean energy, renewable energy, energy efficiency, climate change mitigation, and climate change adaptation.

Section 302. Development of information and resources clearinghouse for vocational education and job training in renewable energy sectors.

Requires the Secretary of Labor, in collaboration with the Secretary of Energy and the Secretary of Education, to develop an internet-based information and resources clearinghouse to aid career and technical education and job training programs for the renewable energy sectors.

Section 303. Green construction careers demonstration project

Requires the Secretary of Labor, in consultation with the Secretary of Energy, to establish a Green Construction Careers demonstration project to promote careers and quality employment practices in the green construction sector and to advance efficiency and performance on construction projects related to the Act.

Discussion

The Committee intends that the Secretary use the authority provided under the Demonstration Program to develop a national framework that would include benchmarks and standards to ensure that qualified pre-apprenticeship programs are effectively aligned and coordinated with appropriate apprenticeship or other

[82] Id. at 3–5.
[83] Id. at 1–2.
[84] Id. at 3–1.

training programs as defined in the Act. One critical area of alignment and coordination is the use of appropriate and industry recognized curriculum such as an approved multi-craft core curriculum, that prepare participants for entry into appropriate apprenticeship or other training programs as defined in the Act and further post-secondary education.

The Committee is also interested in the Secretary developing other standards to ensure that qualified pre-apprenticeship programs are high quality and responsive to local labor market demand, including standards encouraging curriculum that provides an introduction to energy and water efficient construction and retrofitting and other renewable energy technologies, and responsive to the diverse needs of program participants—including limited English language proficient participants—and the specific training, support, and placement services they will require for successful entry into qualified apprenticeship programs.

PART 2—CLIMATE CHANGE WORKER ADJUSTMENT ASSISTANCE

Section 311–313. Petitions, eligibility requirements, and determinations; Program benefits; General provisions

Establishes a program to assist workers with transition to new careers by enabling workers to receive transition assistance and career-related training. Benefits include 156 weeks of income supplement, 80% of monthly health care premiums, up to $1,500 for job search assistance, up to $1,500 for moving assistance, and additional employment services for skills assessment, job counseling, training, and other services. Payments under the program cannot exceed the proceeds from the auction of allowances set aside for this purpose.

Discussion

These sections will create a program for climate change worker adjustment assistance, to be funded by a portion of the revenues from the auction of emission allowances. The program will be administered by the Department of Labor (DOL). America has a long tradition of investing in targeted assistance programs for workers who are affected by shifts in Federal policy and economic transitions. Like the GI Bill and provisions under the 1990 Clean Air Act amendments supporting affected coal miners, this program will result in a net economic benefit to our economy, helping workers gain the technical expertise needed in our changing economy.

SUBTITLE B—INTERNATIONAL CLIMATE CHANGE PROGRAMS

Section 321. Strategic interagency board on international climate investment

Directs the President to establish the Strategic Interagency Board on International Climate Investment, composed of the Secretary of State, the Administrator of EPA, and other Federal officials, to assess, monitor and evaluate the progress and contributions of U.S. Government entities in supporting financing for international climate change activities.

Section 322. Emission reductions from reduced deforestation

Amends Title VII of the Clean Air Act by inserting Part E, which includes the following new sections:

Part E—Supplemental Emission Reductions

Section 751. Definitions

Defines forest carbon activities.

Section 752. Purposes

States the purposes to develop and improve mitigation policies and actions that reduce deforestation and forest degradation or conserve or restore forest ecosystems in a measurable, verifiable, and reportable manner.

Section 753. Emission reductions from reduced deforestation

Directs the Administrator of the United States Agency for International Development (U.S. AID), in consultation with the Administrator of EPA, the Secretary of Agriculture, and the heads of any other appropriate agencies to establish a program to build capacity in developing countries to reduce emissions from deforestation and to participate in international markets for offset credits, which will ensure a sufficient supply of offsets for American companies.

Section 323. International clean energy deployment program

Directs the Secretary of State, in consultation with an interagency group designated by the President, to establish a program that supports activities in developing countries contributing to substantial, measurable, reportable and verifiable reductions, sequestrations or avoidance of greenhouse gas emissions.

Section 324. International climate change adaptation and global security program

Directs the Secretary of State, in consultation with the Administrator of U.S. AID, the Secretary of the Treasury, and EPA to establish a program to provide assistance to the most vulnerable developing countries to protect and promote the interests of the United States.

Section 325. Evaluation and reports

Directs the Strategic Interagency Board to implement a system to monitor and evaluate the effectiveness and efficiency of assistance provided under this Act. Also directs the Board to prepare an annual report to Congress describing steps agencies have taken and the progress made toward accomplishing the objectives of this part, and the ramifications of any potentially destabilizing impacts climate change may have on the interests of the United States.

Section 326. Report on climate actions of major economies

Requires the Secretary of State, working with the Strategic Interagency Board, to prepare annually an interagency report on the climate change and energy polices of the top five largest greenhouse gas emitting countries that are not members of the Organization for Economic Co-Operation and Development. Requires the report to provide Congress and the American public with a better

understanding of the actions these countries are taking to reduce greenhouse gas emissions.

Discussion

The objectives of this subtitle are to establish a coordinated and strategic approach to providing international climate finance and provide a strong commitment to securing an international climate agreement that promotes the interests of the United States. This subtitle supports the key elements of such an agreement which include adaptation to climate change, deployment of clean energy technologies, and reducing rates of deforestation in developing countries.

A key finding of the IPCC and other groups is that climate change will have its most severe impacts in many of the least developed parts of the world, often the same countries that have made the smallest contributions to the emissions of greenhouse gases. For example, people living in developing countries are more than 20 times as likely to be affected by climate-related disasters.[85] Drought prone regions in Africa, low-lying countries in Southeast Asia, and glacier-water dependent parts of South America and Asia may be particularly vulnerable. Because many of these regions already suffer from instability and limited resources, climate change has the potential to greatly magnify instability, competition and conflict, which threatens the national security interests of the United States. The Center for Naval Analysis in a 2007 report described climate change, its impact on developing countries, and the implications for U.S. national security as a "threat multiplier".[86] The background section of this report further describes how these changes have the potential to impact the national security of the U.S.

Some impacts of climate change will occur even if global efforts to reduce emissions begin immediately and are highly successful. For example, World Health Organization estimates that climate change may already contribute to 150,000 deaths each year and the IPCC projects that by 2020, long before high concentrations of greenhouse gases are reached, 75 to 250 million people in Africa will be exposed to increased water stress as a result of climate change.[87, 88] Assistance to reduce water scarcity, reduce impacts of flooding and sea-level rise, improve agricultural practices, and improve health systems to address climate-related health impacts will help least developed nations respond to the impacts of unavoidable climate change and reduce the degree to which climate change creates or exacerbates threats to national security.

By building capacity and providing powerful incentives to develop national efforts to reduce deforestation, the Committee intends that the program authorized under Section 322 will both achieve significant reductions in emissions from deforestation and

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[85] Oxfam America. Adaptation 101.

[86] Center for Naval Analysis. 2007. National Security and the Threat of Climate Change. Available at: http://securityandclimate.cna.org/report/National%20Security%20and%20the%20Threat%20of%20Climate%20Change.pdf.

[87] WHO, "Climate and health," Fact Sheet No. 266, August 2007, *www.who.int/mediacentre/factsheets/fs266/en/index.html*

[88] IPCC AR4 Working Group II, Summary for Policymakers, at p.13. Available at: http://www1.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-spm.pdf.

[89] Intergovernmental Panel on Climate Change, Climate Change 2007: Impacts, Adaptation and Vulnerability, at 12 (2007).

allow many nations to participate in carbon markets, which will expand the supply of available offset credits and reduce costs for American companies. Deforestation is one of the largest sources of greenhouse gas emissions in developing countries, amounting to approximately 15 percent of overall emissions globally. Recent scientific analysis shows that it will be substantially more difficult to limit the increase in global temperatures to less than 2 degrees centigrade above preindustrial levels without reducing and ultimately halting net emissions from deforestation.

This subtitle also establishes a program for development of clean energy technologies in developing countries. Investments in clean energy technology cooperation can substantially reduce global greenhouse gas emissions while also increasing demand for clean energy products, opening up new markets for United States companies, spurring innovation, and lowering costs.

SUBTITLE C—ADAPTING TO CLIMATE CHANGE

PART 1—DOMESTIC ADAPTATION

Subpart A—National Climate Change Adaptation Program

Section 341. National climate change adaptation program and services

Requires the President to establish a National Climate Change Adaptation Program to increase the overall effectiveness of Federal climate change adaptation efforts.

Sections 342. Climate Services

Directs the Secretary of Commerce to establish within the National Oceanic and Atmospheric Administration a National Climate Service to develop and disseminate climate information, data, forecasts, and warnings at national and regional scales.

SUBPART B—PUBLIC HEALTH AND CLIMATE CHANGE

Sections 351. Sense of Congress on public health and climate change

States the sense of Congress that the Federal Government should take all means and measures to prepare for and respond to the public health impacts of climate change.

Section 352. Relationship to other laws

Clarifies that nothing in the subpart limits authorities or responsibilities conferred by other law.

Section 353. National strategic action plan

Requires the Secretary of Health and Human Services to prepare and implement a national strategic action plan to assist health professionals in preparing for and responding to the impacts of climate change on public health, with disease surveillance, research, communications, education, and training programs, supported by a science advisory board and a needs assessment.

Section 354–356. Advisory board; Reports; Definitions

Establishes a science advisory board to advise the Secretary on science related to the health effects of climate change. Requires a

needs assessment for health effects of climate change and periodic reports on scientific developments and recommendations for updating the national strategy.

Discussion

Experts within the global public health community have reached a broad consensus that climate change poses a serious threat to public health. The IPCC's Fourth Assessment report described severe likely impacts on public health, including:

- Increased numbers of people suffering from death, disease, and injury from heat waves, floods, storms, fires and droughts.
- Increased cardio-respiratory diseases due to higher concentrations of ground-level ozone pollution related to climate change.
- Changes in the range of some infectious disease vectors.
- Increased malnutrition and consequent disorders, including those relating to child growth and development.[89]

The World Health Organization (WHO) estimates that climate change may already be causing more than 150,000 deaths each year.[90]

Dr. Howard Frumkin, Director of the Centers for Disease Control (CDC) provided more detail in testimony before the Committee in February 2009, stating that "CDC considers climate change a serious public health concern."[91] He described several categories of public health threats posed by climate change:

- Direct effects of heat
- Health effects related to extreme weather events
- Air pollution-related health effects
- Water- and food-borne infectious diseases
- Vector-borne and zoonotic diseases
- Emerging pathogens susceptible to weather conditions
- Allergies
- Mental health problems[92]

CDC has concluded that "an effective public health response to climate change can prevent injuries, illnesses, and death while enhancing overall public health preparedness."[93] The U.S. Global Change Research Program has similarly concluded that: "health impacts of climate change are related to heat stress, waterborne diseases, poor air quality, extreme weather events, and diseases transmitted by insects and rodents. Robust public health infrastructure can reduce the potential for negative impacts."[94]

As Committee members have noted, among those State officials charged with protecting the public health, there is no partisan divide or disagreement on the need to take urgent action to address climate change. For example, the Association of State and Territorial Health Officials, representing all 50 States, recently joined in a letter to the Committee saying:

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[89] Intergovernmental Panel on Climate Change, Climate Change 2007: Impacts, Adaptation and Vulnerability, at 12 (2007).

[90] World Health Organization, Health and Environmental Linkages Initiative, Climate Change. Available at http://www.who.int/heli/risks/climate/climatechange/en/

[91] Testimony of Dr. Howard Frumkin before Senate Committee on Environment & Public Works, "Update on the Latest Global Warming Science," Feb. 25, 2009, at 1.

[92] Id. at 2–3.

[93] Id. at 14.

[94] http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/key-findings;

> We are very concerned about the human health effects of climate change. Global warming is expected to worsen many health problems, including heat and other weather-related illness and injury, diarrheal and other infectious diseases. Respiratory illness associated with pollution and allergens in the air may be exacerbated. To help prepare for these challenges, we need to develop proactive global climate change preparedness strategies now.

Sections 351–356 provide for development of a comprehensive national strategic action plan to respond to these public health threats in the United States and an advisory board to develop and oversee these efforts.

SUBPART C—CLIMATE CHANGE SAFEGUARDS FOR NATURAL RESOURCES CONSERVATION

Section 361–363. Purposes; Natural Resources Climate Change Adaptation Policy; Definitions

States that the purpose of this subpart is to establish a program to address climate change impacts on natural resources. States that it is the policy of the Federal Government to use all practicable means and measures to assist natural resources to adapt to climate change.

Section 364. Council on Environmental Quality

Directs the Council on Environmental Quality to advise the President and coordinate federal actions regarding strategies, plans, programs, and activities relating to protecting, restoring, and maintaining natural resources so that they are more resilient to the ongoing and expected impacts of climate change.

Section 365. Natural Resources Climate Change Adaptation Panel

Establishes a Natural Resources Climate Change Adaptation Panel, chaired by the White House Council on Environmental Quality, as a forum for interagency coordination on natural resources adaptation.

Section 366. Natural Resources Climate Change Adaptation strategy

Requires the Adaptation Panel to develop a strategy for making natural resources more resilient to the impacts of climate change and ocean acidification. The strategy is to assess likely impacts to natural resources, strategies for helping wildlife adapt, and specific actions that Federal agencies should take.

Section 367. Natural resources adaptation science and information

Establishes a process through National Oceanic and Atmospheric Administration and the U.S. Geological Survey National Global Warming and Wildlife Science Center, to provide technical assistance, conduct research, and furnish decision tools, monitoring, and strategies for adaptation.

Section 368. Federal Natural Resource Agency adaptation plans

Requires Federal agencies to develop natural resource adaptation plans, consistent with the National Adaptation Strategy, including

prioritized goals and a schedule for implementation of adaptation programs within their respective jurisdictions.

Section 369. State Natural Resources Adaptation Plans

Requires States to develop Natural Resources Adaptation Plans as a condition for receiving funds under the programs in this subtitle.

Section 370. Natural Resources Climate Change Adaptation Account.

Provides that of the allowances devoted to state natural resources adaptation 84% be provided to State wildlife agencies and 16% to State coastal agencies. Funds placed in the Natural Resources Climate Change Adaptation Fund are to be distributed to Federal agencies in the following amounts: 28% to the Department of the Interior (DOI) for endangered species, bird, and Fish and Wildlife Service programs, wildlife refuges, and the Bureau of Reclamation; 8% to DOI for cooperative grant programs; 5% to DOI for tribal programs; 20% to the Land and Water Conservation Fund (⅙ to DOI for competitive grants, ⅓ for land acquisition under § 7 of the Land and Water Conservation Fund Act, ⅙ to U.S. Department of Agriculture (USDA) for the Forestry Assistance Act, and ⅓ to the USDA for land acquisition,); 8% to USDA for the Forest Service; 12% to EPA for estuaries and freshwater ecosystems; 8% to the Army Corps of Engineers for freshwater ecosystems; and 11% to the Secretary of Commerce for coastal and marine ecosystems. All funds must be used for adaptation activities, and States shall ensure that a minimum of 10% of project costs are paid by non-Federal sources.

Section 371. National fish and wildlife habitat and corridors information program

Establishes a program in the DOI to support States and tribes in the development of a geographical information system (GIS) of databases of fish and wildlife habitats and corridors. Facilitates the use of database tools in wildlife management programs.

Section 372. Additional provisions regarding Indian tribes

Clarifies that nothing in this subpart amends Federal trust responsibilities to Indian tribes or exempts information on tribal sacred sites or cultural activities from the Freedom of Information Act, and clarifies that DOI may apply the provisions of the Indian Self-Determination and Education Assistance Act as appropriate.

Discussion

America's rich natural resources are estimated to provide the nation with billions of dollars of services each year: wetlands purify our water and protect our coasts, forests clean our air and water and provide income to the timber industry, and recreational opportunities like hunting and fishing fuel the economy of many rural areas. However, climate change places many of the nation's bountiful natural resources at risk. Even if legislation is enacted to cut global warming pollution today, climate change will drastically impact natural resources for many decades to come as wildlife and plant populations are subjected to changes in temperature, precipi-

tation, stream flow, and the timing and frequency of severe weather events.

The IPCC reports that 20–30% or potentially more plant and animal species will be placed at risk of extinction by climate change.[95] For changes over 2.5°C, the IPCC predicts that there will be major changes in ecosystem structure and function with "predominantly negative consequences for biodiversity and ecosystem goods and services, e.g., water and food supply."[96] Global warming could, for example, lead to the destruction of many wetlands, including up to 90% of wetlands in the prairie potholes region.[97] Increased fire risk due to drought, seasonal shifts, and increased pest load can significantly increase fire risk in the western US.[98,99] Water levels in Lake Erie, already below average, could decrease 4–5 feet by the end of this century, disrupting shoreline habitat.[100]

This subpart invests critical funding to help our natural resources survive this period of climatic change. Investment now will help avoid impacts that will be difficult or impossible to reverse.[101] Currently, resource managers are without the financial means to address the many challenges of climate change. The allowance value provided through the pollution reduction program in Division B will assist natural resource managers in safeguarding existing natural resources and wildlife and taking steps to increase resilience to climate change. Under this subpart, federal, state, and tribal agencies will receive funding to carry out natural resource adaptation activities that help with survival of fish and wildlife, fish and wildlife habitats, plants, and associated ecological processes threatened by climate change or ocean acidification.

SUBPART D—ADDITIONAL CLIMATE CHANGE ADAPTATION PROGRAMS

Section 381. Water system mitigation and adaptation partnerships

Requires the EPA Administrator to establish a water system mitigation and adaptation partnership program for distribution of funds under the Act by States as grants for water system adaptation projects.

Identifies eligible parties and uses. Provides for a competitive process, prioritizing applications for water systems at the greatest and most immediate risk of facing significant climate-related negative impacts, and establishes requirements and goals to be met by States in awarding grants.

Discussion

Drinking, irrigation and wastewater systems will face significant challenges in adapting to climate change impacts. Such impacts are expected to include extreme flooding, extended and extreme

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[95] IPCC AR4 Working Group 2, Section 4 ES, and Section 4.4.11.

[96] IPCC AR4 Working Group 2, Summary for Policy Makers, p.11.

[97] M.G. Anderson and L.G. Sorenson. 2001. "Global Climate Change and Waterfowl: Adaptation in the Face of Uncertainty." Transaction of the 66th North American Wildlife and Natural Resources Conference (Washington, DC: Wildlife Management Institute, 300–319.

[98] Westerling, A. L., H. G. Hidalgo, D. R. Cayan, and T. W. Swetnam. 2006. Warming and earlier spring increases Western U.S. forest wildfire activity. Science 313: 940–43.

[99] http://www.usgcrp.gov/usgcrp/Library/nationalassessment/overviewforests.htm.

[100] Lofgren, B.M., Quinn, F.H., Clites, A.H., Assel, R.A., Eberhardt, A.J., Luukkonen, C.L. 2002. Evaluation of Potential Impacts on Great Lakes Water Resources Based on Climate Scenarios of Two GCMs, Journal of Great Lakes Research, 28(4):537–554.

[101] National Wildlife Federation. 2008. Investing in America's Natural Resources—The Urgent Need for Global Warming Legislation. Reston, Virginia.

drought, water scarcity, water quality degradation and increased treatment requirements.[102] These impacts affect the function and operation of existing water infrastructure as well as water management practices.[103] Furthermore, as water demand continues to grow because of population growth and increased affluence, so will the stress on the Nation's aging water infrastructure.[104]

A recent study by the National Association of Clean Water Agencies estimates that wastewater and drinking water utilities will require $325–$692 billion to address climate change through 2050.[105] Utilities will likely have to engage in costly adaptation strategies to respond to climate change impacts including: increasing conservation to extend existing sources of water; learning to tap new water sources, such as seawater desalination, lower quality groundwater and wastewater reuse; increasing storage and conveyance to accommodate changes in the timing and intensity of precipitation and runoff; increasing wastewater treatment; addressing flooding damage, particularly in coastal areas; and creating water management portfolios that add flexibility and support sustainability of the water supply.[106]

Water and wastewater infrastructure planning operates within a 20- to 40-year timeframe, making timely action critical.[107] This section establishes a program that will provide additional funds to assist drinking water, wastewater, and irrigation systems to carry out the projects and activities necessary to secure and sustain the Nation's water supply in the face of climate change.

Section 382. Flood control, protection, prevention and response.

Requires the Administrator to establish a program for distribution of funds by States under the Act for flood control, protection, prevention and response projects. Establishes eligible uses, objectives and priorities, including projects that advance multiple objectives and utilize non-structural approaches.

Discussion

According to the IPCC, "[t]he impacts of climate change on freshwater systems and their management are mainly due to the observed and projected increases in temperature, sea level and precipitation variability."[108] Extreme flooding and drought are likely to occur due to increased precipitation intensity and variability.[109] Warmer temperatures will very likely lead to higher precipitation extremes that "directly affect the risk of flash flooding and urban flooding."[110] The program established by this section will provide funding to local governments to carry out projects that reduce flood

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[102] National Association of Clean Water Agencies, "Confronting Climate Change: An Early Analysis of Water and Wastewater Adaptation Costs," October 2009, 1–2, *http://www.nacwa.org/images/stories/public/2009-10-28ccreport.pdf.*

[103] Id. at 175.

[104] Id.

[105] National Association of Clean Water Agencies, "Confronting Climate Change: An Early Analysis of Water and Wastewater Adaptation Costs," October 2009, 1–2, *http://www.nacwa.org/images/stories/public/2009-10-28ccreport.pdf.*

[106] Id. at 3–5.

[107] Id. at 1–2.

[108] Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, "Climate Change 2007: Impacts, Adaptation and Vulnerability." Chapter 3: Fresh Water Resources and their Management, at 175.

[109] Id.

[110] Id. at 187

risk and plan for increased flood risk associated with climate change.

Section 383. Wildfire

Establishes a program to provide grants for education programs to raise awareness of homeowners and citizens about wildland fire protection practices, including FireWise or similar programs, training programs for local firefighters on wildland firefighting techniques and approaches, equipment acquisition to facilitate wildland fire preparedness, development and implementation of community wildfire protection plans, and forest restoration that accomplishes fuels reduction.

Discussion

Climate change also is a significant contributor to the increasing severity and duration of wildfires throughout the United States. Research indicates that in the last twenty years there has been a fourfold increase in the number of major wildfires.[111] This increase in wildfire activity has in turn impacted the ability of federal land management agencies to adequately fund and address wildfire suppression and mitigation efforts. In 1991 the Forest Service spent 13% of its budget on wildfire. As of 2007, it spent 45% of its budget on wildfire.[112] Further resources provided by the bill will assist in responding to these impacts.

Section 384. Coastal and Great Lakes state adaptation program

Requires the EPA Administrator to distribute annually funding for coastal State economic protection under the Act pursuant to a prescribed formula, for projects and activities addressing the impacts of climate change in coastal watersheds.

Discussion

Coastal areas will be particularly impacted by climate change. For example, water quality in coastal areas will be compromised in several ways. First, sea level rise will extend areas of salinization of groundwater and estuaries, resulting in a decrease in freshwater availability for humans and ecosystems.[113] Second, higher surface temperatures will promote algal blooms and increase the concentration of pathogens in drinking water sources.[114] Third, due to higher runoff and lower water levels, increasing nutrients and sediments will negatively impact water quality in general.[115] Sea level rise will also impact infrastructure such as roads, levees, and wastewater and drinking water systems and require significant investment to modify and relocate these systems. The funding provided by this section will assist coastal communities in adapting to these impacts.

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[111] Science Vol. 313. no. 5789, pp. 927–928 (Aug. 18, 2006).

[112] New York Times, "On Fringe of Forests, Homes and Fires Meet," June 26, 2007. Available at: *http://www.nytimes.com/2007/06/26/us/26fire.html.;* Testimony of Phyllis K. Fong, Inspector General, U.S. Department of Agriculture, before Senate Committee on Energy and Natural Resources, "Costs of Wildfire Suppression," January 30, 2007.

[113] Id. at 175.

[114] Id. at 188.

[115] Id.

DIVISION B—POLLUTION REDUCTION AND INVESTMENT

Title I—Reducing Global Warming Pollution

SUBTITLE A—REDUCING GLOBAL WARMING POLLUTION

Amends the Clean Air Act to add Title VII to establish a declining limit on global warming pollution and to spur private investment in technologies to reduce global warming pollution.

Section 101. Reducing global warming pollution

Creates a new Title VII in the Clean Air Act, which establishes a global warming pollution reduction and investment program.

Discussion

Subtitle A, which creates a new Title VII in the Clean Air Act, establishes a comprehensive market-based program for greenhouse gas reduction. This subtitle establishes the rules and creates the structure of the greenhouse gas emissions reduction market. By allowing sources to purchase and sell allowances, the bill permits the private sector to find and use the lowest-cost reductions for compliance with emissions limitations. The program creates an explicit economic value for emissions reductions, which also creates a financial incentive for, and financial return on, investment in innovations leading to emissions reductions.

A market-based pollution reduction system was first introduced in the U.S. in 1989 by then-President, George H.W. Bush as an innovative strategy for reducing the pollutants that caused acid rain. With bipartisan support, the 101st Congress incorporated the Bush cap and trade proposal in the Clean Air Act Amendment of 1990. Since 1990, the cap and trade approach first used in the acid rain program has enjoyed continued bipartisan support, having been incorporated several times in legislative proposals and pollution control regulations put forward by both the Clinton administration and the second Bush administration. The pollution reduction program in the Committee-reported bill seeks to capture the benefits of the acid rain approach.

The success of the cap and trade approach reflects several factors. First, imposing a cap on emissions ensures that the full measure of required emissions reductions specified by Congress will be achieved. Second, businesses can operate with far more flexibility under a cap and trade program than under more traditional pollution control programs. Third, under cap and trade, businesses can buy and sell the difference between their actual emissions and their legally mandated emissions levels. Cap and trade literally creates a market for emissions reductions and what markets do best is drive costs down. As a result, individual businesses can find the lowest cost way to reduce their emissions—including by purchasing surplus reductions from other sources that can achieve them at lower cost. The overall cost of the program, in turn, will be that much lower. At the same time, markets are the single most effective driver of innovation; thus, a market for greenhouse gas emissions reductions is certain to spur significant innovations in reducing emissions.

Under the pollution reduction program established by the reported bill, EPA will distribute and auction to covered entities a

fixed number of emissions "allowances," each of which gives the owner the authorization to emit one ton of CO2-equivalent in any one year. An entity may then sell the allowances to another covered entity provided that at the end of the year it surrenders to the EPA enough allowances to cover its emissions for that year. Allowances that are not used to cover emissions in one year may be saved for use in later years, an option known as "banking." Because the number of emissions allowances the EPA distributes every year is fixed, then, by definition, an allowance remaining in excess of a plant's emissions represents an "extra" reduction that may be transferred to another plant to cover its incremental emissions. No matter how many or how few allowances are transferred total emissions always remain constrained by the cap, guaranteeing economy-wide emissions reductions.

How businesses reduce their GHG emissions has been left completely to the discretion of the businesses themselves. As a result, it is up to them to manage the continually changing economic, technical, and other circumstances in which they are operating and to integrate their basic business activities with their obligation to meet their emissions cap. Through emissions trading, businesses have the means, as well as the incentive, to find the lowest-possible-cost ways of achieving compliance anywhere within the entire economy and to reap financial rewards for developing those means. Under this program, each business can choose between and among various compliance alternatives, ranging from energy-efficient technologies, to capturing CO2-emissions from smokestacks, to changing their materials or processes, to acquiring allowances or offsets from other businesses that can make reductions more cost-effectively.

Critical to the character and success of the program is the fact that the aggregate number of allowances circulated every year is fixed, or capped. As a result of this design, businesses must plan for economic growth and change while operating against a limit on their total greenhouse gas emissions. This cap and trade regime gives businesses a direct financial incentive to reduce emissions below required levels. Extra reductions, in the form of unused allowances, give companies flexibility to offset increases in emissions in one location with reductions in another. In addition, businesses, like electric utilities, can optimize control by reducing emissions when it is least expensive to do so and then bank the surplus allowances for future use or sale. Consequently, extra reductions give covered sources the flexibility needed to respond to economic demands and opportunities while meeting their compliance obligations under the cap.

TITLE VII—GLOBAL WARMING POLLUTION REDUCTION AND INVESTMENT PROGRAM

PART A—GLOBAL WARMING POLLUTION REDUCTION GOALS AND TARGETS

Section 701. Findings

Section 702. Economy-wide reduction goals

States that the goals of Title VII and Title VIII are to reduce economy-wide global warming pollution to 97% of 2005 levels by 2012, 80% by 2020, 58% by 2030, and 17% by 2050.

Section 703. Reduction targets for specified sources

Requires that the regulations issued under Title VII reduce emissions of covered sources to 97% of 2005 levels by 2012, 80% by 2020, 58% by 2030, and 17% by 2050.

Section 704. Supplemental pollution reductions

Directs the EPA Administrator to achieve additional low-cost reductions in global warming pollution equal to an additional 10 percentage points of reductions from U.S. emissions in 2005 by using a small portion of the emissions allowances to provide incentives to reduce emissions from international deforestation.

Section 705. Review and program recommendations

Directs the Administrator to submit a report to Congress every four years that includes an analysis of the latest science relevant to climate change, an analysis of capacity to monitor and verify greenhouse gas reductions, an analysis of worldwide and domestic progress in reducing global warming pollution, and additional measures that can be taken.

Section 706. National academy review

Directs the EPA Administrator to commission reports from the National Academy of Sciences every four years, to evaluate the most recent EPA report submitted under Section 705, and provide recommendations for actions to avoid dangerous climate change.

Section 707. Presidential response and recommendations

Directs the President to use existing authority to respond to recommendations in the reports issued under sections 705 and 706. If the National Academy review confirms that further emission reductions are needed, either domestically or globally, the President may direct federal agencies to use existing statutory authority to meet National Academy recommendations, and must submit a report to Congress recommending additional steps (including legislation) necessary to achieve emissions reductions.

Discussion

Scientists continue to develop a deeper understanding of the causes and consequences of climate change. Because climate science is rapidly evolving, sections 705–707 are designed to ensure that Congress has access to the most current science possible when evaluating future climate-related legislation. The EPA and National Academy studies will update Congress on the latest science

regarding the sources and concentrations of greenhouse gases, their anticipated impact on the climate, and the deployment of technologies to reduce emissions. They will also provide an unbiased, technical examination of the performance of this legislation and ways in which it might be improved.

Section 708. Consultation With States. Requires the Administrator to consult with States involved with the Regional Greenhouse Gas Initiative, Mid-west Governor's Accord and the Western Climate Initiative in the development of any regulations required by this title.

PART B—DESIGNATION AND REGISTRATION OF GREENHOUSE GASES

Section 711. Designation of greenhouse gases

Establishes a list of greenhouse gases regulated under this title: carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons (HFCs) emitted as a byproduct, perfluorocarbons, and nitrogen trifluoride. The EPA Administrator may designate additional anthropogenic greenhouse gases by rule.

Section 712. Carbon dioxide equivalent value of greenhouse gases

Lists carbon dioxide equivalents for each gas. Requires periodic review of equivalence values by the Administrator.

Section 713. Greenhouse gas registry

Directs EPA to establish a Federal greenhouse gas registry and comprehensive reporting system for greenhouse gas emissions.

Discussion

This section directs the Administrator to utilize continuous emissions monitoring systems or alternative systems and methodologies that provide precision, reliability, accessibility, and timeliness that is as similar as technically feasible to continuous emissions monitoring systems. The Committee recognizes that continuous emissions monitoring systems may not be technically feasible nor provide the greatest accuracy when monitoring emissions from certain industrial processes, particularly those with relatively small quantities of emissions of high global warming potential gases. The Committee encourages the Administrator to take both the variability of industrial processes and the accuracy of alternative systems and methodologies into account when determining the type of emissions monitoring system or methodology to require.

Section 714. Perfluorocarbon and other nonhydrofluorocarbon fluorinated substance production regulation

Provides the Administrator the discretion to regulate nonhydrofluorocarbon fluorinated substances emitted during the production of perfluorocarbon either under the emissions limits established under Section 722 or through a mandatory best achievable performance standard that is revised to be more stringent every two years or consistently over a 10–year period.

PART C—PROGRAM RULES

Section 721. Emission allowances

Establishes an annual tonnage limit on greenhouse gas emissions from specified activities. Directs the EPA Administrator to establish allowances equal to the tonnage limit for each year (with one allowance representing the permission to emit one ton of greenhouse gases, measured in tons of carbon dioxide equivalent).

Section 722. Prohibition of excess emissions

Prohibits covered entities from emitting or having attributable greenhouse gases in excess of their allowable emissions level, which is determined by the number of emission allowances and offset credits they hold on the specified date. Electricity generators, entities that refine or import petroleum-based and other specified liquid fuels for introduction into interstate commerce, fluorinated gas manufacturers, and emitters of nitrogen trifluoride are covered entities starting with emissions in 2012. Specified industrial sources, including process emissions associated with petroleum refining, are covered starting with emissions in 2014. Process emissions from refineries that are small business refiners are covered starting with emissions in 2015. Local distribution companies that deliver natural gas are covered starting with emissions in 2016.

Allows covered entities to use a total of up to two billion tons of domestic and international offset credits in lieu of allowances to demonstrate compliance for a portion of their emissions. The ability to use these offsets is divided pro rata among all covered entities. Of the two billion tons of offset credits, ¾ may be derived from domestic offsets and ¼ from international offsets. If the Administrator determines that an insufficient number of domestic offsets are available, the number of international offsets available may be increased by 750 million metric tons. Starting with the 2018 compliance obligation, covered entities using offset credits must submit five tons of international offset credits for every four tons of emissions being offset.

Allows the use of term offset credits in lieu of domestic offset credits to demonstrate temporary compliance with the Act. When the crediting term of a term offset credit expires, the covered entity must either submit a term offset credit to continue to demonstrate compliance temporarily or submit an allowance or domestic offset credit to demonstrate final compliance.

Covered entities may also submit an international emission allowance or compensatory allowance in place of a domestic emission allowance.

Section 723. Penalty for noncompliance

Establishes penalties for parties that fail to comply with the requirements of Title VII.

Section 724. Trading

Clarifies that Title VII as established by this section does not restrict who can hold an allowance, nor does it restrict the purchase, sale, or other transactions involving allowances.

Section 725. Banking and borrowing

Permits unlimited banking of allowances for use during future compliance years. Establishes a two-year rolling compliance period by allowing covered entities to borrow an unlimited number of allowances from one year into the future. Covered entities may also satisfy up to 15% of their compliance obligations by submitting emission allowances with vintage years 2 to 5 years in the future, but must pay an 8% premium (in allowances) to do so.

Discussion

Allowing sources to "bank" reductions—by making more reductions than required and saving unused allowances for compliance in future years brings both economic and environmental benefits. Sources that create a supply of additional or excess reductions when they can achieve those reductions at lower cost, will, by using those banked allowances in later years, be able to curb their costs in later years should future reductions become more expensive. At the same time, the environment benefits from reductions are achieved earlier.

Another feature of the greenhouse gas allowance trading market is the option afforded sources, under certain conditions, to "borrow" allowances or incremental reductions from future years to offset for purposes of compliance in a current year. This option grants sources additional flexibility to manage their financial and compliance demands in the most economically efficient way possible. Since "borrowing" allowances from future years represents a delay in achieving required reductions, the borrowing program in effect requires sources to achieve greater reductions in later years.

Section 726. Market stability reserve

Directs the Administrator to create a "market stability reserve" of emission allowances that will be auctioned at a minimum set price ($28/ton in 2012) that increases annually. The auction of additional allowances will help contain the costs of meeting the annual greenhouse gas limits and minimize price fluctuations. The "market stability reserve" will be established by setting aside a number of allowances from each year's limit. Following an auction, the reserve will be refilled through the purchase and retirement of offset credits.

Discussion

The market stability reserve is designed to provide certainty in the price of allowances by preventing large price fluctuations. This also has the benefit of preventing speculation by dampening the ability to increase allowance prices above the pre-determined reserve price.

At the start of the program, the Administrator is required to fill the reserve with allowances that are taken from each year of the program in amounts specified in section 771. Every quarter, the Administrator shall auction a specified number of allowances from the reserve with a minimum reserve price that begins at $28 and rises at a specified percentage plus inflation. The auction of additional allowances at a specified price will reduce the allowance price once the reserve price trigger is met.

Proceeds from such auctions, if any, shall be used to refill the reserve. The Administrator shall accomplish this by using any such proceeds to purchase offset credits. The Administrator shall then retire those offset credits and establish four new allowances (in addition to those established under section 721) for every five tons of offset credits retired. The Administrator shall then refill the market stability reserve to its original level by placing the newly-established allowances into the strategic reserve to the extent necessary to return the reserve to its original size.

Section 727. Permits

Clarifies the obligations of operators of major stationary sources under the Clean Air Act's Title V operating permit program under the newly-established Title VII program.

Section 728. International emission allowances

Establishes criteria that must be met before allowances from foreign programs can be used for compliance by covered entities.

PART D—OFFSETS

Section 731. Offsets Integrity Advisory Board

Establishes an independent Offsets Integrity Advisory Board composed of scientists and others with relevant expertise, to review the offsets program and provide recommendations to the President on: Offset project eligibility, scientific uncertainty, quantification methodologies and related issues.

Section 732. Establishment of offsets program

Directs the President to establish an offsets program and requires that regulations ensure offsets are verifiable, additional, and permanent. Directs the President to delegate to the Secretary of Agriculture elements of the program regarding agriculture and forestry offset projects and direct work with farmers, ranchers and foresters.

Section 733. Eligible project types

Requires the President to establish and update a list of offset project types that are eligible under the program, taking into account the recommendations of the Offsets Integrity Advisory Board. Projects types for consideration include fugitive methane emissions from coal mines, landfills, and oil and gas distribution facilities; agricultural, grassland, and rangeland sequestration and management practices; and changes in carbon stocks attributed to land use change and forestry activities.

Section 734. Requirements for offset projects

Requires that for each offset project type, the President establish standardized methodologies for: Determining additionality; establishing activity baselines; measuring performance; and accounting for and mitigating potential leakage. Establishes requirements regarding the permanence of offset projects and crediting periods, and procedures to address reversals, including penalties.

Section 735. Approval of offset projects

Establishes procedures for approval of offset projects, including reporting and record-keeping requirements and a requirement that an offset project developer certify the accuracy of information provided in an approval petition.

Section 736. Verification of offset projects

Directs the President to establish requirements for the verification of offset project performance, and requires that verification reports be prepared by accredited third-party verifiers. Allows the President to revoke the accreditation of any third-party verifier that the President finds fails to maintain professional qualifications or to avoid a conflict of interest.

Section 737. Issuance of offset credits

Establishes procedures for the issuance of offset credits and directs the President to issue offset credits only if the emissions reduction or sequestration has already occurred and other specified conditions are met.

Section 738. Audits

Requires the President to conduct, on an ongoing basis, random audits of offset projects, offset credits, and practices of third-party verifiers. Allows the President to delegate this responsibility to State governments.

Section 739. Program review and revision

Requires the periodic evaluation and updating of specified areas and components of the offsets program.

Section 740. Early offset supply

To ensure a supply of offset credits in the early years of the program, allows for the issuance of offset credits for offsets from State or other programs that meet specified criteria. Limits the issuance of offset credits under this section to reductions that occur between January 1, 2009, and three years after enactment or the effective date of Federal offset regulations, whichever is sooner.

Section 741. Environmental considerations

Requires additional environmental considerations for forestry and other land management-related offset projects.

Section 742. Trading

Provides that the trading provisions applicable to allowances are also applicable to offset credits.

Section 743. Office of offsets integrity

Establishes an Office of Offsets Integrity within the Department of Justice to: supervise and coordinate investigations and civil enforcement of the carbon offsets program established in this part.

Section 744. International offset credits

Allows the President to issue international offset credits for activities that take place in developing countries. Requires that all international offset credits meet the criteria established for all off-

sets under sections 732–742, as well as the requirements specific to international offsets established under this section. Requires that the U.S. be a party to a bilateral or multilateral agreement or arrangement with the country where an offset activity would take place before any international offset credits can be issued. Establishes procedures and requirements regarding the issuance of international offset credits for activities that reduce deforestation.

Section 102. Definitions

Defines key terms for Titles VII and VIII of the Clean Air Act.

Section 103. Offset reporting requirements

Amends Section 114 of the Clean Air Act to require any person who is an offset project developer to establish and maintain records for a period of not less than the offset project crediting period plus five years.

Discussion

Part D directs the President to promulgate regulations creating a program to verify offset projects and issue offset credits. Offset allowances are in addition to emission allowances and are created when a facility or entity that is not covered by the emissions cap can certify that it has either has reduced the number of carbon dioxide equivalents that the facility or entity otherwise would have emitted in that calendar year or has increased the number of carbon dioxide equivalents that the facility or entity otherwise would have captured from the atmosphere and stored in that calendar year. Capped sources may then purchase these offset allowances to help them meet their compliance obligations under the cap.

Part D specifies procedures and standards that the President must use in certifying, monitoring, and enforcing offsets. The procedures and standards established in the subtitle are intended to ensure that the emission reductions and sequestration increases certified as offsets will be real, verified, monitored, permanent, enforced, and additional to what would have happened in the absence of the offset certification. Such certainty benefits both the purchasers of allowances (by ensuring valid offsets) and the suppliers of offsets (by providing a solid, reliable market).

This part includes a provision requiring the President to delegate to the Secretary of Agriculture elements of the program related to oversight of agriculture and forestry projects and direct interaction with farmers, ranchers and forest landowners. The Committee recognizes the important role the U.S. Department of Agriculture will play in the offset program and intends for USDA and the Environmental Protection Agency to work collaboratively in the implementation of this program. There is substantial evidence that the agriculture sector, which has no emissions limitation obligations under the pollution reduction program established by this title, could achieve cost-effective reductions or carbon sequestration. This provision is aimed at facilitating participation by farmers, ranchers, and foresters in the offset market.

In testimony before the Committee in legislative hearings on the bill, Thomas Vilsack, Secretary of the U.S. Department of Agriculture, stated that:

> The creation of an offset market will create new opportunities for the agricultural sector. In particular, our analysis indicates that annual returns to farmers and ranchers range from about $1 billion per year in 2015–20 to almost $15–20 billion in 2040–50, not accounting for the costs of implementing offset practices. In the short term, the economic benefits to agriculture from cap-and-trade legislation will likely outweigh the costs. In the long term, the economic benefits from offsets markets easily trump increased input costs from cap-and-trade legislation.[116]

The Committee expects the President, or such agency as the President determines, to issue an initial list of offset project types and their associated methodologies under section 733 as expeditiously as practicable, but in no case later than one year from the date of enactment. Additional project types, along with their associated methodologies, should be added to the list as expeditiously as practicable, but in no case later than two years from the date of enactment. In developing baselines, measurement, and monitoring methodologies for a broad range of offset project types as quickly as possible, the agencies should build on experience in programs already underway at the Environmental Protection Agency, such as Natural Gas STAR, Climate Leaders, and the Landfill Methane Outreach Program.

The provisions for early offset supply under section 740 would enable existing offset projects certified through state, tribal or voluntary programs to qualify for offset credits under the pollution reduction program authorized by this Title. It is the intent of the Committee for both programs established under state or tribal law as well as other voluntary programs with criteria and methodologies of equal stringency that meet the requirements of subsection (a)(2) to be eligible to provide offset credits under this section. To ensure an adequate supply of offsets and to enable early actors with verifiable offset projects to receive offset credits, the Committee encourages the President to expeditiously determine whether voluntary programs that petition for approval under subsection (e) meet the requirements of subsection (a)(2) and if so, approve these programs.

SUBTITLE B—DISPOSITION OF ALLOWANCES

Section 111. Disposition of allowances for global warming pollution reduction program

Provides for emission allowances to be distributed for three primary goals: to protect consumers from energy price increases, to assist industry in the transition to clean energy, and to spur energy efficiency and the deployment of clean energy technology. Allocates allowances to prevent deforestation and support national and international adaptation efforts and for other purposes.

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[116] Statement of Thomas J. Vilsack, Secretary of Agriculture, before Senate Committee on Environment & Public Works, "Legislative Hearing on Clean Energy Jobs and American Power Act," Oct. 27, 2009.

PART H—DISPOSITION OF ALLOWANCES

Section 771. Allocation of emission allowances

Provides for allocation and auction of allowances.

Discussion

This section provides for the distribution of allowances established by the pollution reduction program. The distribution of allowances are targeted towards four principal areas—consumer protection, transition to a clean energy economy, climate change adaptation, and investment in clean energy technologies. In the initial years of the program, a majority of allowances are distributed freely to covered entities to ease the transition to clean energy sources and reduce the overall cost to consumers of the emissions reduction program. This ensures that the major sectors covered by the pollution reduction program are able to accommodate their pollution reduction obligation. These allowances begin to decline after 2025 and by the year 2030 over 91% of allowances are auctioned or invested in public purposes, such as energy efficiency, renewable energy and climate change adaptation.

A majority of the allowances are dedicated to consumer protection throughout the life of the bill. As much as 69% of allowances remaining after set-asides are applied are reserved for consumer rebates by the year 2035.

Section 772. Electricity consumers

Directs distribution of allowances allocated for the benefit of consumers to local electricity distribution companies (LDCs), whose retail rates are regulated by States or other entities. Requires half of the allowances to be distributed based on historic emissions and half based on retail sales, but prohibits any electricity LDC from receiving allowances whose value exceeds the LDC's direct and indirect costs of complying with this Title. Requires that these allowances be used exclusively for the benefit of the LDC's retail ratepayers, and prohibits the Administrator from releasing an LDC's allowances until after a ratemaking or similar proceeding has been conducted regarding the appropriate use of the allowances.

Directs distribution of allowances for merchant coal generators and for certain generators with long-term power purchase agreements and small LDCs and rural electric cooperatives and publicly owned utilities that are small LDCs to support renewable electricity deployment, energy efficiency programs, and consumer assistance for low-income ratepayers. Requires the Administrator to conduct an audit of LDCs receiving allowances under this section to ensure that emission allowances have been used exclusively for the benefit of retail ratepayers. Every three years, the U.S. Government Accountability Office is required to report on the integrity of the allowance program, and the Administrator is required to submit to Congress an evaluation of the disposition of emission allowances.

Discussion

Customers of electric utilities will receive approximately 35% of allowances remaining after set-asides are distributed, representing a significant portion of current utility emissions. Local electric dis-

tribution companies (LDCs), whose rates are regulated by the States, will receive 30% of the allowances, which are required to be used to protect consumers. Merchant coal and long-term power purchase agreements will receive 5% of the allowances. The allowances will phase out over a five-year period from 2026 through 2030. For further consumer protection, small LDCs (including rural electric cooperatives) receive 0.5% of distributed allowances and will receive an additional 0.5% distribution of the supplemental allowance allocation described below each year from 2012 through 2025, phasing out by 2030.

These provisions are intended to protect consumers, especially low-income consumers. LDCs for electricity (also known as load serving entities) provide a convenient platform for distributing the economic benefits of a cap and trade system back to consumers, as they are the ones which deliver monthly electrical bills. They are also under the guidance and oversight of state public utility commissions—giving states oversight of how the funds directed through these provisions are spent. The section specifically requires LDCs to use the allowances for the benefit of consumers. However, this section does not prescribe the mechanism LDC's should use to benefit consumers; such as direct rebates or end-user energy efficiency improvements.

This section further directs the EPA and the Federal Energy Regulatory Commission (FERC) to conduct and issue a study on whether the allocation formula for allowances provided to merchant coal generators is resulting in windfall profits to merchant coal generators or substantially disparate treatment of merchant coal generators operating in different markets or regions. This section also requires the EPA Administrator to find, based on the report, whether such impacts are occurring, and if so, adjust the allocation formula accordingly. The Committee does not intend for EPA to make such a determination and adjust the allocation formula prior to evaluating data on the impact of the allocation formula, but rather the Committee intends for EPA, in consultation with FERC, to base the determination on the analysis of data derived from multiple years of allowance allocations that have taken place.

Section 773. Natural gas consumers

Directs the Administrator on how to distribute the allowances allocated for the benefit of consumers to local natural gas distribution companies, whose retail rates are regulated by States or other entities.

Discussion

Local natural gas distribution companies, whose rates are regulated by the States, will receive 9% of the distributed allowances, which are required to be used to protect consumers from natural gas price increases. These allowances will phase out over a five-year period from 2026 through 2030.

Section 774. Home heating oil and propane consumers

Directs the Administrator on how to distribute allowances to States for programs to benefit residential and commercial users of home heating oil, propane, and kerosene.

States will receive 1.5% of the distributed allowances for programs to benefit users of home heating oil and propane. These allowances will phase out over a five-year period from 2026 through 2030.

Section 775. Domestic fuel production

Oil refiners will receive 1.25% of allowances starting in 2014 and ending in 2026, with an additional 1% allocated to small business refiners.

Section 776. Consumer protection

Establishes two rebate programs to provide rebates to offset electricity and other cost impacts on consumers. The section establishes a low and moderate income rebate fund as well as a climate change consumer rebate fund to distribute proceeds from the sale of allowances.

Fifteen percent of distributed allowances will be auctioned each year with the proceeds distributed to low- and moderate-income families to protect against any energy cost increases. The allocation increases to 18.5% after 2029.

Section 777. Exchange for state-issued allowances

Provides for fair compensation and exchange of allowances issued by the State of California, the Regional Greenhouse Gas Initiative and the Western Climate Initiative prior to commencement of federal program.

Section 778. Auction procedures

Establishes single-round, sealed-bid, uniform-price auction procedures, which may be modified by the Administrator. Provides that a percentage of allowances will be made available for small business refiners to purchase for compliance for that year at the average auction price.

Section 779. Auctioning allowances for other entities

Establishes rules by which the Administrator may auction allowances on behalf of other entities.

Section 780. Commercial deployment of carbon capture and permanent sequestration technologies

Directs the EPA Administrator to establish an incentive program to distribute allowances to support the commercial deployment of CCS technologies in both electric power generation and industrial applications. Entities that receive allowances are required to capture at least 50% of the carbon dioxide emitted.

Discussion

1.75% of distributed allowances from 2014 through 2017, 4.75% in 2018 and 2019, and 5% in subsequent years will be allocated to help electric utilities cover the costs of installing and operating carbon capture and sequestration technologies.

The allowance disbursement program is structured to provide greater incentives for facilities to deploy CCS technologies early in the program. Specifically, the program allows entities to receive payments in advance of completing the CCS project. Entities re-

ceiving advanced payments must meet certain milestones and achieve a 50% reduction in emissions within 18 months of startup of the project. Penalties are established for failing to meet these standards including repayment of allowances received. In addition, the program provides incentives for facilities to capture and sequester larger amounts of carbon dioxide by linking the amount of bonus allowances provided to the amount of carbon captured.

Section 781. Oversight of allocations

Requires the Comptroller General to prepare biannual reviews of the programs administered by the Federal Government that distribute emission allowances or funds from Federal auctions of allowances.

Section 782. Early action recognition

Provides allowances for projects and activities that sequestered carbon or reduced greenhouse gas emissions prior to the beginning of the Pollution Reduction and Investment Program established in this Title. This includes projects that held a state, local, or voluntary offset credit prior to January 1, 2009 or a project or process improvement for which the entity publicly stated greenhouse gas reduction goals and can demonstrate measurable reductions against those goals.

Discussion

Section 782(a)(2) directs the Administrator to distribute allowances to entities that do not hold offset credits from a state, local, or voluntary program but meet the following criteria for documented early reductions, avoidance, or sequestration of greenhouse gas emissions—(1) the entity publicly stated greenhouse gas reduction goals and publicly reported against those goals; (2) the entity demonstrated entity-wide net greenhouse gas reductions; and (3) the entity demonstrates the actual projects or process improvements undertaken to make reductions and documents the reductions (such as through documentation of engineering projects). The Committee intends these criteria to include emissions reductions made by entities pursuant to programs covered by a memorandum of understanding (MOU) or other agreement involving the U.S. Environmental Protection Agency, in which the entity's greenhouse gas reduction goals are described in such MOU or other agreement, and for which entities can demonstrate, with sufficient precision (e.g., through documentation of engineering projects), entity-wide net greenhouse gas reductions.

Section 783. Establishment of deficit reduction fund

Establishes a deficit reduction fund in the U.S. Treasury.

Discussion

From 2012 through 2029, 10% of allowances annually will be auctioned with the proceeds used to reduce the Federal deficit, increasing to 22% in 2030 through 2039 and 25% from 2040 through 2050. As a result of these provisions, the bill will not increase the Federal deficit in any decade over the life of the program.

SUBTITLE C—ADDITIONAL GREENHOUSE GAS STANDARDS

Section 121. Greenhouse gas standards

Establishes Title VIII of the Clean Air Act to set forth additional requirements related to greenhouse gases.

TITLE VIII—ADDITIONAL GREENHOUSE GAS STANDARDS

Section 801. Definitions

Defines terms used in Title VIII.

Section 811. Standards of performance

Directs the Administrator to delay until January 1, 2020 the establishment of standards of performance under section 111 of the Clean Air Act for stationary sources whose emissions are not subject to the requirements of Section 721 and are eligible as offset projects under Section 733.

Section 122. HFC regulation

Amends Title VI of the Clean Air Act by adding a new section 619 to phase down the consumption of hydrofluorocarbons (HFCs), many of which are extremely potent greenhouse gases, under a separate limit and reduction schedule. Using a market-based regulatory approach, requires HFC consumption to be phased-down to 15% of the baseline by 2032. Requires allowances to be distributed through a combination of annual auctions and non-auction sales. Allows offset credits for destruction of chlorofluorocarbons (CFCs).

Section 123. Black carbon

Directs the Administrator to conduct a study of black carbon emissions, report on existing efforts to reduce domestic black carbon pollution, and in coordination with the Secretary of State, to report to Congress on current and potential future assistance to foreign nations to help reduce black carbon pollution. Includes in Title III of the Clean Air Act a provision directing the Administrator to use existing authority to achieve further reductions.

Section 124. States

Amends section 116 of the Clean Air Act to preserve States' existing authority to adopt and enforce standards or limitations on air pollutants under the Clean Air Act, including greenhouse gas emissions.

Section 125. State programs

Includes in Title VIII of the Clean Air Act section 861, barring States from implementing or enforcing a Comprehensive Greenhouse Gas Emission Limitation program to control greenhouse gas emissions covered by Title VII. The moratorium begins in 2012 or 9 months after the first auction, whichever is earlier, and continues through the year 2017. Includes section 862, which authorizes the Administrator to make grants to air pollution control agencies under section 105 of the Clean Air Act to implement global warming programs established under the Clean Air Act.

Section 126. Enforcement

Amends section 307 of the Clean Air Act to provide that in ruling on a petition for review under the Clean Air Act, the court may remand without overturning an action of the Administrator under specified circumstances. Sets deadline for the Administrator to respond to a court remand and take final action.

Section 127. Forestry sector greenhouse gas accounting

Directs the Administrator in consultation with the Secretaries of Agriculture and the Interior, to provide an annual accounting of sequestration and emissions of greenhouse gases from forests and forest products. Requires that the accounting be based on existing sources of data.

Section 128. Conforming amendments

Provides for conforming amendments to Clean Air Act enforcement and administrative provisions to incorporate Titles VII and VIII.

This section includes provisions relating to the treatment of greenhouse gases under other Clean Air Act programs by providing that greenhouse gases may not be added to the list of criteria air pollutants under section 112 of the Clean Air Act or hazardous air pollutants under Section 108 of the Clean Air Act based on their effect on climate change, and further that section 115 of the Clean Air Act shall not apply to an air pollutant with respect to that pollutant's contribution to climate change. In addition, this section excludes sources below 25,000 tons of annual emissions of carbon dioxide equivalent from the definition of "major emitting source" under the Clean Air Act and therefore the New Source Review and Prevention of Significant Deterioration regulations for major emitting sources. Finally, this section excludes sources emitting less than 25,000 tons CO_2 per year from the requirement to hold a permit under Title V, if such sources do not otherwise trigger the Title V requirements based on their emission of other pollutants.

Section 129. Davis-Bacon compliance

Requires recipients of emission allowances or funding under this Act to provide reasonable assurances that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by the Federal Government pursuant to this Act will be paid at least prevailing wages as determined by the Secretary of Labor in accordance with what is commonly known as the Davis-Bacon Act (subchapter IV of chapter 31 of title 40, United States Code). Excludes application of these provisions to retrofitting of residential buildings (apart from large apartment buildings) and smaller nonresidential buildings.

SUBTITLE D—CARBON MARKET ASSURANCE

Sections 131. Carbon market assurance

States the sense of the Senate that there shall be a carbon market oversight program to provide for effective and comprehensive market oversight and enforcement that lowers systemic risk and protects consumers.

SUBTITLE E—ENSURING REAL REDUCTIONS IN INDUSTRIAL EMISSIONS

Section 141. Ensuring real reductions in industrial emissions

Creates a program within Title VII of the Clean Air Act, as established by this Act, to ensure real reductions in industrial greenhouse gas emissions through emission allowance rebates.

PART F—ENSURING REAL REDUCTIONS IN INDUSTRIAL EMISSIONS

Section 761–762. Purposes; Definitions

Outlines purposes, including promoting a strong global effort to significantly reduce greenhouse gas emissions and preventing an increase in greenhouse gas emissions in foreign countries as a result of compliance costs incurred under Title VII of the Clean Air Act.

Section 763–764. Eligible industrial sectors; Distribution of emission allowance rebates

Establishes a program that rebates emission allowances to eligible industrial sectors to compensate these sectors for costs incurred as a result of compliance with Title VII of the Clean Air Act, as added by this Act. Requires the Administrator to determine which sectors and sub-sectors should be eligible for rebates through a rulemaking based on an assessment of the energy and greenhouse gas intensity of each sector and the trade intensity of each sector. This section also allows firms to petition the Administrator for relieve based upon evidence that the industrial subsector meets eligibility criteria even though the sector as a whole may not.

Rebates are distributed to eligible facilities on a product output basis, with compensation provided for both direct and indirect compliance costs. For direct compliance costs, allowance distribution is calculated by multiplying a facility's product output by the sector average tonnage of greenhouse gas emissions per unit of product output. For indirect costs passed on by electric utilities, allowance distribution is calculated by multiplying a covered or uncovered facility's product output: (1) by the "emissions intensity" of each facility's electric power supplier; and (2) by the sector average electricity use per unit of product output. In calculating indirect costs, this section requires the Administrator to account for any benefit received by a facility through the distribution of allowances to the facility's electricity provider under Section 772.

This section provides incentives for increased efficiency by limiting the calculation of greenhouse gas per unit of output, the electricity intensity factor, and the electricity efficiency factor to an amount less than the amount previously calculated. To accommodate for fluctuations in the business cycle, when calculating the greenhouse gas intensity and electricity efficiency, this section requires the Administrator to use the 5 most recent years of the best available data from up to 7 years prior to the year in which such calculations are made, excluding data from the highest and lowest year for both factors

Section 765. International trade

States the sense of the Senate that there will be trade provisions, including a border measure that is consistent with international

obligations of the United States and designed to work in conjunction with provisions that allocate allowances to energy-intensive and trade-exposed industries.

TITLE II—PROGRAM ALLOCATIONS

Section 201. Distribution of allowances for investment in clean vehicles

Provides that 3% of distributed allowances through 2017 and 1% from 2018 through 2025 will be allocated for investments in electric vehicles and other advanced automobile technology development and deployment. Distributes emission allowances to vehicle manufacturers and component suppliers to re-equip or expand manufacturing facilities in the U.S. to produce qualified advanced technology vehicles or plug-in electric drive or hybrid-electric, hybrid hydraulic, plug-in hybrid, electric, fuel cell drive medium- and heavy-duty motor vehicles (including transit vehicles). Directs that the proceeds of the auction of allowances pursuant to section 771(b)(3) to be placed in a Clean Vehicle Technology Fund and used for the following purposes: 75% for the Black Carbon Reduction Grant Program authorized under Section 795A of the Energy Policy Act of 2005; 20% for the use and integration of domestically-produced plug-in electric drive vehicles; and 5% for the development and demonstration of a national transportation low-emission energy plan.

Section 202. State and local investment in energy efficiency and renewable energy

States will receive 10.35% of distributed allowances in 2012 and 2013; 8.55% in 2014 and 2015; 5–6% in the years 2016–2021 and more than 4% of allowances in 2022 and thereafter. These allocations are supplemented by 0.5% each year of the additional allowances described below under "Supplemental Allowances."

Section 202 distributes emission allowances to States, Indian tribes, and local governments, for programs to reduce greenhouse gas emissions, promote energy efficiency and conservation, and accelerate the deployment of renewable energy sources. States receive 60 percent of allowances distributed under this section, of which not less than 40 percent shall be used for specified energy efficiency programs. Of the 40 percent reserved for energy efficiency programs, not less than 10 percent shall be used for thermal energy efficiency projects, not less than 5 percent for energy efficiency building retrofits pursuant to Section 164 of Division A, and not less than 35% to benefit persons of low income. States may also use their allocation allowances for other purposes including renewable energy programs, improvements in electricity transmission, retrofits and housing investments, and smart grid development.

Local governments receive 25 percent of allowance allocations under this section for energy efficiency projects through the Energy Efficiency Community Block Grants program. Fifteen percent of allowances under this section are distributed directly to renewable energy generators for renewable energy facilities with a capacity of 10 megawatts or greater.

Section 203. Energy efficiency in building codes

Provides 0.50% of distributed allowances will be allocated to support implementation of codes to reduce emissions of greenhouse gases from buildings. Distributes emission allowances to update and implement building codes pursuant to Section 163 of Division A.

Section 204. Energy Innovation Hubs

Distributes emission allowances for research and development of clean technologies. Allowances are distributed through regional energy innovation hubs.

Section 205. ARPA–E research

Distributes emission allowances to qualified research institutions to achieve the goals of the Advanced Research Projects Agency–Energy (ARPA–E) as described in section 5012(c) of the America COMPETES Act.

The total for advanced energy research under sections 204 and 205 equals 4% of distributed allowances in 2012 and 2013, 2% in 2014 and 2015, and 1.7% of allowances in subsequent years.

Section 206. International clean energy deployment program

Distributes emission allowances to provide assistance to developing countries for clean energy deployment pursuant to Section 323 of Division A.

Section 207. International climate change adaptation and global security

Distributes emission allowances to provide assistance to developing countries for climate change adaptation pursuant to Section 324 of Division A.

Section 208. Energy efficiency and renewable energy worker training

Provides emission allowances to the Secretary of Energy to carry out the Energy Efficiency and Renewable Worker Training program authorized in the Workforce Investment Act of 1998.

Section 209. Worker transition

Provides emission allowances for worker transition assistance pursuant to the program established in Sections 311–313 of Division A. In 2012 and 2013, 1.5% of distributed allowances will be allocated for worker assistance, and to train workers for jobs in the areas of energy efficiency and renewable energy. This allocation will be 0.55% of allowances in 2014 and 2015, and 1% annually thereafter.

Section 210. State programs for greenhouse gas reduction and climate adaptation

Distributes proceeds of emission allowances for implementation of projects, programs, or measures to reduce emissions of greenhouse gases and build resilience to the impacts of climate change. Ten percent (10%) of allowance proceeds are reserved for funding of coastal and Great Lake State economic protection programs pursuant to the program in Section 384 of Division A. At least one percent (1%) of allowance proceeds are reserved to support climate

change response programs administered by Indian tribes. Ten percent (10%) of allowance proceeds are dedicated to wildfire grants pursuant to Section 383 of Division A. The remaining proceeds are allocated to fund State and local programs, including; grants to fund water systems mitigation and adaptation partnerships; flood control and response; recycling programs; adverse impacts on agriculture and ranching activities; and programs addressing air pollution and air quality. States and tribes are required to prepare Climate Change Response Plans governing uses of funds and to report on such uses in detail every two years.

In 2012 and 2013, 1.34% of distributed allowances will be allocated to the states to be used for domestic adaptation purposes, including water system adaptation, wildfire reduction, flood mitigation, and coastal adaptation, and for activities to reduce greenhouse gas emissions, including promoting state and local recycling programs. The number of allowances allocated for state adaptation and mitigation programs ranges from 0.5% to 1.3% from 2012 through 2026 and will increase to 2.18% thereafter.

Section 211. Climate change health protection and promotion fund

Distributes proceeds of emission allowances for activities to prepare and respond to the impacts of climate change on public health pursuant to Sections 351–356 of Division A. 0.10% of distributed allowances will be auctioned annually with the proceeds used for protection of public health against the effects of climate change.

Section 212. Climate change safeguards for natural resources conservation

Distributes proceeds of emission allowances for activities to prepare and respond to the impacts of climate change on natural resources pursuant to Section 370 (a) of Division A. 1% of distributed allowances will support protection of natural resources each year from 2012 through 2021, increasing to 2% in 2022 through 2026 and 4% annually in subsequent years.

Section 213. Nuclear worker training

Distributes proceeds of emission allowances to provide assistance for training of workers that will be essential for the growth of safe domestic nuclear and nuclear-related industries pursuant to Section 132 of Division A.

Section 214. Supplemental agriculture, abandoned mine lands, renewable energy, and forestry

Provides allowances for investment in agriculture, abandoned mine lands, and forestry projects to sequester carbon and reduce greenhouse gas emissions pursuant to the program in Section 155 of Division A. 1% of allowances in 2012 and 2013 and .28% in 2014 through 2016 will be allocated for investments in agriculture, abandoned mine lands, and renewable energy. These allocations are supplemented by 1% each year of the additional allowances described below under "Supplemental Allowances."

Section 215. Investment in greenhouse gas reductions from the transportation sector

A Climate Change Transportation Fund is established in the Treasury into which the proceeds of auctions under Section 771(b)(10) of the Clean Air Act for the vintage years specified are deposited. These funds are available without further appropriation for the following purposes: 50 percent shall be used for the planning and competitive grant programs under Section 832 of the Clean Air Act; and 50 percent shall be distributed as formula grants for public transportation in accordance with Section 215(d) of this Act. The distribution formula to be used by USDOT for the public transportation grants under 215(d) is a composite of the purposes and formulas contained in current transit law: 80 percent based on 49 USC 5307; 10 percent based on 49 USC 5311; and 10 percent based on 49 USC 5340.

Discussion

Section 215 contains a transit set-aside. This funding is eligible, consistent with current transit law, for capital needs and preventative maintenance (as well as operating assistance in areas under 200,000). A three part distribution blends existing Federal Transit Administration formulas: to urbanized areas based on population under section 5307; to areas other than urbanized ones under 5311 (including the 15 percent set-aside for rural intercity bus services); and also via the growing and high density states formula under 5340.

Section 216. State programs for natural resource adaptation activities

Distributes proceeds of emission allowances for activities to prepare and respond to the impacts of climate change on natural resources pursuant to Section 370(b) of Division A.

LEGISLATIVE HISTORY

The Clean Energy Jobs and American Power Act (S. 1733) was introduced by Senator Kerry and co-sponsored by Senator Boxer on September 30, 2009. On November 5, 2009, the full Committee on Environment and Public Works considered and ordered favorably reported a substitute amendment.

HEARINGS

In the 111th Congress the Committee on Environment and Public Works and its subcommittees held 15 hearings considering issues relating to clean energy jobs and global warming pollution reduction legislation. These hearings included:

"Investing in Green Technology as a Strategy for Economic Recovery," on January 7, 2009; "Update on the Latest Global Warming Science," on February 25, 2009; "Oversight—the Environmental Protection Agency's Renewable Fuel Standard," on April 1, 2009; "Oversight of the GSA and Energy Efficiency in Public Buildings," on April 22, 2009; "Business Opportunities and Climate Policy," on May 19, 2009; "Moving America toward a Clean Energy Economy and Reducing Global Warming Pollution: Legislative Tools," on July 7, 2009; "Economic Opportunities for Agriculture, Forestry

Communities, and Others in Reducing Global Warming Pollution," on July 14, 2009; "Transportation's Role in Climate Change and Reducing Greenhouse Gases," on July 14, 2009; "Ensuring and Enhancing U.S. Competitiveness while Moving toward a Clean Energy Economy," on July 16, 2009; "Clean Energy Jobs, Climate-Related Policies and Economic Growth—State and Local Views," on July 21, 2009; "Climate Change and National Security," on July 30, 2009; "Climate Change and Ensuring that America Leads the Clean Energy Transformation," on August 6, 2009.

The Committee held three legislative hearings to consider S. 1733, the Clean Energy Jobs and American Power Act, on October 27, October 28, and October 29, 2009.

ROLL CALL VOTES

On November 5, 2009, the full Committee on Environment and Public Works considered and ordered favorably reported a substitute amendment by a vote of 11–1 (Senators Boxer, Carper, Lautenberg, Cardin, Sanders, Klobuchar, Whitehouse, T. Udall, Merkley, Gillibrand, and Specter voted yea, and Senator Baucus voted nay). Senators Inhofe, Voinovich, Vitter, Barrasso, Crapo, Bond, and Alexander did not record a vote.

REGULATORY IMPACT STATEMENT

In compliance with section 11(b) of rule XXVI of the Standing Rules of the Senate, the committee notes, based on CBO's estimates discussed in detail below, that S. 1733 would require certain types of private entities to participate in the programs to reduce GHG emissions created by the bill. CBO estimates that the annual cost of this requirement would amount to tens of billions of dollars for private-sector entities.

MANDATES ASSESSMENT

Based upon the CBO cost estimate below, the Committee notes that S. 1733 contains several intergovernmental mandates as defined in the Unfunded Mandates Reform Act (UMRA).

CBO estimates that the aggregate cost of mandates in the bill would significantly exceed the annual thresholds established in UMRA for intergovernmental and private-sector mandates ($69 million and $139 million in 2009, respectively, adjusted annually for inflation). CBO also estimates that States would receive at least $60 billion in allowances over the 2012–2016 period for specific purposes, offsetting mandate costs.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

In compliance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

DECEMBER 16, 2009.

Hon. BARBARA BOXER,
Chairman, Committee on Environment and Public Works,
U.S. Senate, Washington, DC.

DEAR MADAM CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 1733, the Clean Energy Jobs and American Power Act.

If you wish further details on these estimates, we will be pleased to provide them. The CBO staff contact is Susanne S. Mehlman.

Sincerely,

DOUGLAS W. ELMENDORF.

Enclosure.

S. 1733—Clean Energy Jobs and American Power Act

Summary: S. 1733 would make a number of changes in energy and environmental policies largely aimed at reducing emissions of gases that contribute to global warming. The bill would limit or cap the quantity of certain greenhouse gases (GHGs) emitted from facilities that generate electricity and from other industrial activities beginning in 2012. The Environmental Protection Agency (EPA) would establish two separate regulatory initiatives known as cap-and-trade programs—one covering emissions of most types of GHGs and one covering hydrofluorocarbons (HFCs). EPA would issue allowances to emit those gases under the cap-and-trade programs. Some of those allowances would be auctioned by the federal government, and the remainder would be distributed at no charge.

The legislation also would authorize the establishment of a Carbon Storage Research Corporation to support research and development of carbon capture and sequestration (CCS) technology. Funding for the corporation would largely be derived from assessments on utilities enforced by the federal government.

CBO and the Joint Committee on Taxation (JCT) estimate that over the 2010–2019 period enacting this legislation would:

- Increase federal revenues by about $854 billion; and
- Increase direct spending by about $833 billion.

In total, those changes would reduce budget deficits (or increase future surpluses) by about $21 billion over the 2010–2019 period. (All estimated effects would be on-budget.) In years after 2019, direct spending would be less than the net revenues attributable to the legislation in each of the 10-year periods following 2019. Therefore, CBO estimates that enacting S. 1733 would not increase the deficit in any of the four 10-year periods following 2019.

The legislation also would authorize appropriations for various programs under EPA, the Department of Energy (DOE), and other agencies. Assuming appropriation of the necessary amounts, CBO estimates that implementing S. 1733 would increase discretionary spending by about $29 billion over the 2010–2019 period. Most of that funding would stem from spending auction proceeds associated with the HFC cap-and-trade program.

S. 1733 contains intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). Several of those mandates would require utilities, manufacturers, and other entities to reduce greenhouse gas emissions through cap-and-trade programs and performance standards. CBO estimates that

the cost of mandates in the bill would significantly exceed the annual thresholds established in UMRA for intergovernmental and private-sector mandates ($69 million and $139 million in 2009, respectively, adjusted annually for inflation).

MAJOR PROVISIONS

The major provisions of S. 1733 are described in the following sections.

Cap-and-trade programs for greenhouse gases

This legislation would designate as GHGs: carbon dioxide (CO_2), methane, nitrous oxide, sulfur hexafluoride, perfluorocarbons, nitrogen trifluoride, and HFCs from a chemical manufacturing process at a stationary industrial source. EPA would be required to establish two cap-and-trade programs aimed at reducing the emission of GHGs in the United States. One program would cover emissions of GHGs other than HFCs. A second program would cover the production and importation of HFCs and the importation of products containing HFCs. (Although HFCs are considered to be greenhouse gases, this cost estimate will subsequently refer to the larger program as the GHG cap-and-trade program and the smaller program specific to HFCs as the HFC cap-and-trade program.)

A cap-and-trade program is a regulatory policy aimed at controlling pollution emissions from specific sources. The legislation would set a limit on total emissions for each year and would require regulated entities to hold rights, or allowances, to the emissions permitted under that cap. Each allowance would entitle companies to emit the equivalent of one metric ton of carbon dioxide equivalent ($mtCO_2e$).[1]

Entities covered by cap-and-trade programs

Based on information from EPA, CBO estimates that about 7,400 facilities would be affected by the cap-and-trade programs established by the bill. The specific details regarding coverage, attribution of emissions to covered entities, and the timing of implementation vary by type of entity and sector of the economy:

- Beginning in 2012, all electricity generators would be required to submit allowances for all GHG emissions from their sites, with the exception of emissions from the combustion of liquid fuels, petroleum coke, and renewable biomass;
- Also beginning in 2012, any facility or entity that produces or imports petroleum- or coal-based liquids, petroleum coke, or natural gas liquids would be required to submit allowances for the GHG emissions that would result from the combustion of those fuels, if combustion of the fuel resulted in the emission of more than 25,000 $mtCO_2e$ per year. Similarly, all facilities or entities that produce or import GHGs for direct use would be required to submit allowances for the emissions that would result when those gases were released into the atmosphere. Emissions from sites that geologically sequester CO_2 also would be covered beginning in 2012;

[1] A carbon dioxide equivalent is defined for each GHG as the quantity of that gas that makes the same contribution to global warming as one metric ton of carbon dioxide, as determined by EPA.

- Beginning in 2014, industrial facilities that manufacture a wide variety of products or that burn fossil fuels would be required to submit allowances for all GHG emissions from their sites—with the exception of emissions from the combustion of various types of liquid fuels, petroleum coke, and renewable biomass—if their activities result in more than 25,000 $mtCO_2e$ of emissions. Small refineries eligible for the tax credit on low-sulphur diesel-fuel production would need to submit allowances for GHG emissions from their sites beginning in 2015;
- Beginning in 2016, natural gas distributors that deliver at least 460 million cubic feet of natural gas per year to customers that are not covered by the cap-and-trade provisions of the bill would need to submit allowances for the GHG emissions that would result from the combustion of the gas delivered to those customers; and
- Under a separate cap, beginning in 2012, producers and importers of HFCs, and importers of products containing HFCs, would be required to submit allowances for each $mtCO_2e$ of HFC they produce or import.

According to CBO's estimates, the programs would cover about 72 percent of U.S. emissions of GHGs in 2012, about 78 percent in 2015, and about 86 percent in 2020.

Operation of the GHG cap-and-trade program

The cap for the GHG cap-and-trade program would take effect in 2012, and emission allowances would be either auctioned or distributed free of charge to covered entities, states, and other specified recipients, who could then retire, sell, or use such allowances to meet the annual obligation for their own emissions.

S. 1733 would not restrict the types of entities or individuals who could purchase, hold, exchange, or retire emission allowances under the GHG cap-and-trade program. An unlimited number of allowances obtained in one year could be saved or "banked" by market participants indefinitely to be used or sold in future years. Limited borrowing of allowances (that is, the use in one year of an allowance that has been established for use in a future year) also would be permitted. The program would create 4,627 million $mtCO_2e$ allowances in 2012—about 97 percent of the amount of such emissions by covered entities in 2005. The number of allowances would increase to as high as 5,482 million $mtCO_2e$ in 2016 to account for certain covered entities that would not begin compliance until that time, and then decline by about 100 million to 200 million $mtCO_2e$ per year—falling to 1,035 million $mtCO_2e$ in 2050 and thereafter, about 14 percent of projected emissions from covered entities in the absence of legislation to regulate such emissions.[2]

Two-Part Distribution Scheme for Allowances. The legislation specifies the percentage of emission allowances that would be freely allocated (that is, distributed at no charge) to certain entities and what percentage of emission allowances would be auctioned by vintage year (that is, the calendar year for which an allowance is established). The distribution scheme for each year has two sepa-

[2] In April 2009, EPA proposed a finding that GHGs contribute to air pollution and, consequently, may endanger public health or welfare. CBO's current baseline for GHG emissions does not take into consideration any regulations under the Clean Air Act that may result from this finding.

rate parts: the first part, referred to in the bill as the "initial reservation," would allocate a specified portion of the allowances created by the GHG cap-and-trade program. A second distribution would be made following this initial reservation (see Table 1). Some of the allowances allocated as part of the initial reservation would be auctioned while others would be distributed at no charge for a variety of purposes, such as support for trade-exposed industries, investments in energy efficiency and renewable energy, and reducing GHGs in the transportation sector. Some of the proceeds from the allowances that would be auctioned would be deposited in the Treasury and would not be available for spending—thus, reducing the budget deficit.

The initial reservation of allowances includes about 3.5 billion allowances that would accumulate in a market stability fund over the 2012–2050 period. Under the bill, EPA could auction allowances in the market stability and if the market price of allowances rose to unexpectedly high levels. CBO's estimate assumes that sales from the market stability fund would not be triggered. However, because of the uncertainty inherent in this process, such sales could occur.

After the first distributions were completed each year, the remaining allowances would be auctioned or freely allocated, as specified in the legislation, in a second round of allocations. Including auctions stemming from the initial reservation, 27 percent to 30 percent of allowances would be auctioned over the 2012–2019 period (see Table 1). The percentage of all allowances auctioned would increase to about 28 percent by 2025 and gradually increase to about 80 percent in 2035 and remain at that level through 2050. Table 1 includes additional details concerning the percentage of emission allowances dedicated to auction and allocated free of charge.

Use of Offsets in Lieu of Allowances. A portion of an entity's compliance obligation under the bill could be met by purchasing domestic or international "offsets" in lieu of purchasing an allowance. An offset would be created by certified activities that are not directly related to the emissions of the facilities covered under the bill, but would reduce GHG emissions or increase the amount of such gases that are captured from the atmosphere and stored (this process is referred to as sequestration). Examples of such offset activities include reducing emissions of methane gas from solid waste landfills, sequestering GHGs on agricultural lands, rangelands, and forests, and reducing the use of nitrogen fertilizer. Under the bill, such offsets could occur domestically or in a developing country if the United States is a party to a bilateral or multilateral agreement or arrangement with the relevant country. Those international agreements or arrangements would specify the types of qualifying projects and methods for verifying the validity of offset activities. Covered entities could also purchase GHG emission allowances established by other countries or international organizations if approved by EPA.

TABLE 1.—GHG ALLOWANCES AUCTIONED AND FREELY ALLOCATED UNDER S. 1733

	By vintage year—							
	2012	2013	2014	2015	2016	2017	2018	2019
Quantity of Emission Allowances (In Millions of Metric Tons)								
Total	4,627	4,544	5,053	5,003	5,482	5,261	5,132	5,002
Initial Reservation of Allowances:								
Auctioned	555	545	606	600	658	631	616	600
Freely Allocated	81	80	88	88	96	92	90	88
Market Stability Fund	93	91	101	100	110	105	103	100
Subtotal	729	716	796	788	863	829	808	788
Second Distribution of Remaining Allowances:								
Auctioned	853	838	792	784	841	795	754	735
Freely Allocated	3,045	2,990	3,465	3,431	3,778	3,637	3,570	3,479
Memorandum—Disposition of Allowances Under S. 1733								
(In percentage of total emission allowances)								
Auctioned	30.4	30.4	27.7	27.7	27.3	27.1	26.7	26.7
Freely Allocated	67.6	67.6	70.3	70.3	70.7	70.9	71.3	71.3
Market Stability Fund	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

Note: Vintage year is the calendar year for which an allowance is established. Components may not sum to totals because of rounding.

Operation of the HFC cap-and-trade program

Beginning in 2012, producers and importers of HFCs as well as importers of products containing HFCs would be required to submit to EPA a consumption allowance or a destruction offset credit for $mtCO_2e$ of HFC. EPA would be authorized to issue destruction offset credits to producers and importers of HFCs if those entities perform or arrange for the recovery and destruction of chlorofluorocarbons (CFCs) from products or equipment already in use in the United States. The allowances available would steadily decline from 90 percent of the baseline use of HFCs (defined in the legislation as the average annual consumption of HFCs plus the average annual quantity of HFCs contained in imported products over the 2004–2006 period) to 15 percent of that baseline after 2032. Destruction offset credits could be used by producers and importers to satisfy a portion of the requirement to submit consumption allowances.

The bill would allow entities to bank an unlimited number of HFC allowances for future use. In contrast to the GHG cap-and-trade program, only those entities that produce and import HFCs or import products containing HFCs would be permitted to purchase an allowance directly from EPA, although EPA would have the authority to make certain exceptions. (The legislation, however, would not restrict which entities could hold, sell, transfer, exchange, or retire consumption allowances in any secondary market for HFC allowances.)

All of the consumption allowances established for the HFC cap-and-trade program would be either auctioned or offered through a fixed-price sale to producers and importers of HFCs and products containing HFCs. The legislation specifies how the HFC allowance price would be calculated for certain auctions and for all fixed-price sales.

Carbon storage research corporation

The legislation would authorize utilities that distribute electricity generated from fossil fuels to establish, subject to approval in a referendum by members of the electricity distribution industry, a Carbon Storage Research Corporation. The corporation would levy annual assessments on distribution utilities based on certain electricity deliveries to retail consumers. Assessments would total between $1.0 billion and $1.1 billion annually and would be used to support research and development of technologies related to CCS. Although formation of the corporation would be voluntary, once it was created, assessments would be compulsory, enforced by the federal government's sovereign authority. Therefore, CBO believes the corporation should be considered governmental in nature and the funds it collects and spends should be included in the federal budget.

Estimated cost to the Federal Government: The estimated budgetary impact of S. 1733 is shown in Table 2. The costs of this legislation fall within budget functions 270 (energy), 300 (natural resources and environment), 350 (agriculture), 370 (commerce and housing credit), 400 (transportation), 500 (education, training, employment, and social services), 550 (health), and 600 (income security). For this estimate, CBO assumes that S. 1733 will be enacted in fiscal year 2010, that the amounts necessary to implement the bill will be appropriated each year, and that outlays will follow historical spending patterns for similar programs.

TABLE 2.—ESTIMATED BUDGETARY IMPACT OF S. 1733

	By fiscal year, in billions of dollars—											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010–2014	2010–2019
CHANGES IN REVENUES												
Total Estimated Revenues	0	10.0	70.2	78.6	95.0	105.3	111.6	122.0	128.2	133.3	253.9	854.2
CHANGES IN DIRECT SPENDING												
Estimated Budget Authority	0	9.0	72.3	80.4	96.2	106.3	112.6	123.6	129.6	135.4	257.9	865.4
Estimated Outlays	0	0.6	61.1	76.7	93.9	104.0	110.7	122.8	128.6	134.4	232.4	832.8
NET CHANGE IN THE BUDGET DEFICIT FROM CHANGES IN REVENUES AND DIRECT SPENDING												
Impact on Deficit [1]	0	9.3	9.1	1.9	1.1	1.3	0.9	−0.8	−0.4	−1.1	21.4	21.4
CHANGES IN SPENDING SUBJECT TO APPROPRIATION												
Estimated Authorization Level	1.1	1.1	1.9	2.2	2.5	4.1	4.5	4.8	6.2	6.3	8.9	34.8
Estimated Outlays	0.1	0.6	1.3	1.8	2.3	3.1	4.0	4.5	5.2	6.0	6.1	28.9

[1] Positive numbers indicate decreases in deficits; negative numbers indicate increases in deficits.
Note: Components may not sum to totals because of rounding.

Basis of estimate: CBO estimates that implementing this legislation would result in additional revenues, net of income and payroll tax offsets, of $254 billion over the 2010–2014 period and $854 billion over the 2010–2019 period. We estimate that direct spending would increase by $232 billion and $833 billion over the same periods, respectively. Those changes in revenues and direct spending would mainly stem from the process of auctioning and freely distributing allowances under the cap-and-trade programs established under this legislation. In addition, CBO estimates that implementing this legislation would increase discretionary federal spending by $29 billion over the 2010–2019 period, assuming appropriation of the amounts estimated to be necessary.

Budgetary treatment of allowances

Efforts to control GHG emissions in this legislation would be enforced through the federal government's sovereign powers and would alter the use of scarce economic resources. While similar in some ways to command-and-control approaches for regulating economic activities, the cap-and-trade system that would be established by the bill for GHG and HFC emissions is fundamentally different because it would create cash-like assets (allowances) whose supply and distribution would be determined by the federal government. As such, CBO believes it is appropriate to include all transactions involving GHG and HFC allowances (including those distributed at no cost) in the budget.

Under S. 1733, both firms and individuals would be eligible to trade GHG and HFC allowances acquired from the federal government in a secondary market that would exceed $80 billion in value in 2012, CBO estimates. Within such a large and liquid market, allowances could be easily and immediately traded for cash. In addition, the legislation would allow the federal government to determine the supply of allowances by defining the scope of covered emissions and limiting the number of allowances to be issued. Under those circumstances, the free distribution of allowances by the federal government would be essentially equivalent to the distribution of cash grants, so CBO believes that such transactions should be treated as additional outlays. At the same time, those allowances would be valuable financial instruments, so CBO thinks that the creation of allowances by the federal government should be recorded as an increase in revenues.

That logic does not hinge on whether the federal government sells or, instead, gives away the allowances. Allowances would have significant value even if given away because the recipients could sell them or, in the case of a covered entity, use them to avoid incurring the cost of compliance. In either case, the recipient receives an asset of equivalent value with no estimated change in the policy effect (i.e., total GHG emissions). For example, either the government could raise $100 by selling allowances and then give that amount in cash to an entity, or it could simply give $100 worth of allowances to that same entity, which could immediately and easily transform the allowances into cash through the secondary market. Sound budgeting requires that the budget treat equivalent transactions in the same way, in CBO's view. Therefore, this estimate treats the creation of allowances and their disposition as budgetary

transactions, regardless of whether the allowances would be sold or distributed at no cost.

Revenues resulting from cap-and-trade programs

The impact of S. 1733 on net federal revenues would largely be determined by the value of allowances created by the bill less the resulting reductions in receipts from income and payroll taxes. Penalties for noncompliance and fees collected to administer the legislation would add a small amount to total revenues, and tax credits available for renewable energy production would reduce federal revenues. The following sections discuss how CBO estimated the allowance prices for GHG and HFC cap-and-trade programs and detail other revenue impacts of the bill.

Estimating the Prices for Emission Allowances. CBO estimates that the price of GHG allowances would rise from about $17 per $mtCO_2e$ of emissions in 2011 to about $30 per $mtCO_2e$ in 2019. Table 3 provides CBO's estimate of annual allowance prices for the separate GHG and HFC cap-and-trade programs that would be created by the bill.

TABLE 3.—CBO ESTIMATES OF ALLOWANCE PRICES UNDER S. 1733

	By fiscal year, in dollars—								
	2011	2012	2013	2014	2015	2016	2017	2018	2019
Estimated GHG Allowance Price	17	18	20	21	23	25	26	28	30
Estimated HFC Allowance Price	n.a.[1]	2	3	4	10	11	13	18	19

[1] Prices equal the weighted average of the estimated auction prices and fixed-price sales required under the legislation.
Note: n.a. = not applicable.

To estimate the marginal cost of reducing GHG emissions—which ultimately would determine the price of allowances—CBO took several steps:

- First, CBO constructed a base case that includes projections of future GHG emissions in the absence of any federal policies to control them, as well as projections of future prices of fossil fuels, electricity, and other products and services closely associated with such emissions;
- Next, we developed estimates of how firms and households would respond to increases in prices for fossil fuels and other sources of GHG emissions;
- Finally, CBO assessed the impact of provisions of the legislation that would influence the market price of allowances. Such other provisions include regulations that would influence GHG emissions and electricity consumption, subsidies for various GHG emission-reducing activities, opportunities for firms to bank allowances in one year and use them in another, and the availability of domestic or international offsets.[3]

Base Case Emission Projections. For its base case of GHG emissions, CBO relied primarily on projections of energy use, fossil fuel prices, and GHG emissions from the April 2009 update of the *Annual Energy Outlook 2009* (AEO 2009) published by the Energy Information Administration (EIA). EIA's inventory of emissions is based on a slightly different methodology than used by EPA, whose

[3] For a more detailed discussion of the methods CBO used to estimate the price for carbon allowances for similar legislation, see How CBO Estimates the Costs of Reducing Greenhouse-Gas Emissions, CBO Background Paper (April 2009).

inventory is considered the official U.S. estimate for purposes of international negotiations and agreements.[4] CBO adjusted the EIA data to align with EPA estimates for the most recent year where actual data is published, while retaining EIA's projected growth rates. CBO assumes that GHG emissions per dollar of the nation's gross domestic product (GDP) will grow (or decline) at the same rate beyond 2030 as they are projected to grow in the preceding decade.[5]

Response by Firms and Households. A key factor in determining the price of an allowance is how quickly and cheaply firms and households can decrease CO_2 emissions by reducing their use of fossil fuels (either directly or indirectly via the goods and services that they consume). The easier it is for firms and households to cut their emissions, the lower the allowance price would need to be to reach a given cap. Available economic models differ considerably in their estimates of how much emissions would decrease for a given allowance price (and its implied effect on fossil fuel prices) because they make different assumptions about the long-run ability of businesses to substitute low-carbon fuels and more efficient technology for high-carbon fuels; the long-run sensitivity of energy usage to higher energy prices; and the speed at which those responses unfold. CBO generated a "middle of the road" response to allowance prices by examining available peer-reviewed models and calculating an average response, measured across multiple models and across different types of end users (such as households, electric utilities, and manufacturers).[6]

Using those models, CBO concludes that the response to price increases (that is the decrease in emissions that would result from any given allowance price) would rise substantially over time as firms and households replace existing vehicles, equipment, structures, and electricity-generating capacity with newer items that use less energy or emit smaller quantities of carbon emissions.[7] CBO's approach provides an estimate of the quantity of emission reductions that would occur at various allowance prices but does not specify how they would occur. That is, it does not provide detail about the timing or magnitude of the adoption of specific technologies, such as nuclear power or CCS, or the quantity of reductions in specific parts of the economy, such as the transportation sector.

Response to Opportunities for Banking of Emission Allowances. If entities covered by the legislation were required to use emission allowances only in the designated vintage year, the price of allow-

[4] See U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2007 (EPA 430–R–09–004, April 2009). CBO also used information provided by EPA to project the consumption of HFCs.

[5] EIA reports projections of GHG emissions in the AEO 2009 only through 2030.

[6] The models analyzed include the EIA's National Energy Modeling System (NEMS), the Emissions Prediction and Policy Analysis (EPPA) model used by climate researchers at the Massachusetts Institute of Technology, the Applied Dynamic Analysis of the Global Economy (ADAGE) model developed at RTI International and used by EPA, the Second Generation Model (SGM) and MiniCAM models developed and used by the Joint Global Change Research Institute, the Model for Evaluating the Regional and Global Effects of GHG Reduction Policies (MERGE) developed by Stanford University and the Electric Power Research Institute, and the Multi-region National-North American Electricity and Environment (MRN–NEEM) model developed and used by CRA International.

[7] For a more detailed discussion of the techniques CBO used to develop this assessment, see Mark Lasky, The Economic Costs of Reducing Emissions of Greenhouse Gases: A Survey of Economic Models, CBO Technical Paper (May 2003). See also How CBO Estimates the Costs of Reducing Greenhouse-Gas Emissions, CBO Background Paper (April 2009).

ances would rise at a rate that reflected the increasing stringency of the cap as emissions. Such a requirement would yield an inflation-adjusted allowance price growing at a rate much greater than the rate of return that CBO estimates firms could obtain on alternative investments.

Under S. 1733, firms would be allowed to bank unlimited numbers of allowances. CBO expects that the profit-maximizing behavior of firms would cause the price of an allowance to increase at the same rate as the return that firms might receive on alternative investments. Specifically, firms would have an incentive to exceed their emission reduction requirements in the initial years of the program (when the cost of meeting the annual caps would be relatively low) and to bank their excess allowances to use in future years (when the cost of meeting the cap would be much higher). Because banking would increase the demand for allowances in the early years (pushing up the allowance price) and increase the supply of allowances in later years (pushing down the allowance price), it would reduce the rate of increase in the price of allowances.

CBO therefore expects that firms would continue to bank allowances up to the point where the rate of increase in the price of allowances equaled the rate of return that they might receive by making alternative investments. CBO believes that the appropriate rate of return that reflects investments of comparable riskiness is the after-tax, long-run, inflation-adjusted rate of return to capital in the U.S. nonfinancial corporate sector, which CBO projects to be 5.6 percent.

In the early years of the cap-and-trade program, the banking provision included in the bill would have a significant impact on the amount of emissions reductions, and thus on the allowance price. CBO estimates that by 2019, covered entities would undertake significantly more mitigation than necessary to meet their annual emission caps, banking about 2.5 billion $mtCO_2e$ of allowances and raising the allowance price in 2019 by about 5 percent, compared with a policy that prohibited banking.

Response to Offset Credits. S. 1733 would allow entities covered by the legislation to meet their GHG reduction obligations by substituting offset credits in lieu of up to two billion GHG allowances each year. CBO expects that covered entities would take advantage of this provision whenever the cost of doing so is less than other methods of compliance. CBO estimates that this provision would have a significant effect on allowance prices. As discussed below, by reducing the cost of complying with the cap, offsets would probably lower the price of allowances by a substantial amount.[8]

Under the bill, domestic offset credits could be used in lieu of up to 1.5 billion allowances per year. Based on EPA data on the available supply of domestic offsets at different prices, CBO estimates that covered entities would use domestic offsets to substitute for about 300 million allowances in 2012 and nearly 400 million allowances by 2020.

Covered entities could also use international offsets in lieu of at least 500 million allowances per year. If domestic offsets were not used to the maximum level, international offsets could substitute

[8] For additional discussion of offset use in a cap-and-trade program for reducing GHG emissions see CBO (2009) The Use of Offsets to Reduce Greenhouse Gases. Economic and Budget Issue Brief (August 3).

for up to 1.25 billion allowances a year. In no case could domestic and international offsets substitute for more than two billion allowances per year. CBO estimates that covered entities would use international offsets in lieu of about 200 million allowances in 2012 and in lieu of about 300 million allowances in 2020.

To calculate the supply of offsets from international sources, CBO adjusted information from EPA on the supply of international offsets at different prices to account for certain provisions in the legislation, expected demand for offsets from other countries, and an estimate of the cost of verifying offsets and marketing them to potential users. Based on information from the Department of State, EPA, and outside experts, CBO expects that agreements with certain countries that would be necessary for them to supply valid offsets would take significant time to negotiate. CBO expects that the number of agreements and the scope of their coverage would increase as participants gained more experience with the program. CBO also anticipates that other developed countries (for example, those in the European Union) would seek offsets for their own emissions reduction programs, thereby pushing up the price of international offsets available to U.S. entities.

Response to Emissions Allowances from Other Programs. S. 1733 also would allow covered entities to submit an unlimited number of emissions allowances obtained from international programs of "comparable stringency" in lieu of GHG allowances issued by EPA. For this estimate, CBO assumed that a program of "comparable stringency" would essentially be equivalent to a cap-and-trade market where allowances sell for a comparable price. Therefore, we expect that this provision would have no effect on the prices of allowances for GHG emissions in the United States.

Sensitivity of Estimated Allowance Prices and Budget Impact to Changes in Assumptions. In cap-and-trade systems such as the one established by this legislation, the most important assumptions affecting the allowance price involve: the responsiveness of households and firms to changes in the prices associated with emissions; the discount rate that allowance holders apply to decisions about whether to bank allowances; and the availability of qualified offset credits from domestic and international sources. Differences in those assumptions can dramatically affect the estimated allowance price and the subsequent impact on the budget.

For example, if the response of households and firms to allowance prices were 10 percent stronger (or weaker), on average, allowance prices would be roughly 9 percent lower or 9 percent higher. If firms are more focused on present costs (by employing a higher discount rate than CBO estimated), they would be more likely to put off expenses associated with reducing emissions and bank fewer allowances. Use of a 6 percent discount rate would decrease CBO's estimate of prices on 2012 by 8 percent and increase projected prices in 2050 by 7 percent. Conversely, firms could be more concerned about the future (by employing a lower discount rate that CBO estimated) and choose to reduce more emissions in the short term, resulting in fewer necessary reductions in the future. Use of a 5 percent rate would increase CBO's estimate of initial-year prices by about 10 percent and decrease projected prices in 2050 by about 10 percent. Finally, allowance prices would be nearly three times higher if no offsets were made available to regulated

entities. If either domestic or international offsets (but not both) were not available, allowance prices would be about 40 percent higher.

Depending on the actual price of allowances, the budget impact of this legislation also would vary. For example, if the price of allowances were $1 higher beginning in 2012, the effect on the budget would be an additional surplus of $1.2 billion over the 2012–2019 period. If instead, allowance prices were $1 lower beginning in 2012, the net gain over that same period would decrease by $1.1 billion.

Estimating the Price of Consumption Allowances for HFCs. CBO estimates that the average price of consumption allowances for HFCs would be in the vicinity of $2 beginning in 2012 and would rise to approximately $19 by 2019. The cap would reduce HFC emissions by about 50 percent by 2020 from about 500 million $mtCO_2e$ to about 250 million $mtCO_2e$.

For this estimate, CBO constructed a base-case projection of HFC consumption through 2025 similar to a base case produced by EPA. After consulting with industry sources, CBO concluded that the growth in HFC consumption after 2025 would be equal to the rate of population growth in the United States, an assumption similar to that made by the International Panel on Climate Change. Using engineering cost data for HFC alternatives provided by EPA, CBO estimated the supply of HFC reductions as a function of price and year. From this data, CBO concluded that the ability to replace HFCs with lower-cost chemical alternatives would increase over time.

As prices for HFC allowances increase, firms would find it more profitable to recycle those chemicals and develop alternatives to these products. To the extent those changes occur, the price of HFC allowances would be different than would otherwise occur.

Net Revenue Calculation. CBO estimates that gross receipts to the federal government from the auction and free allocation of allowances under the bill would total $291 billion over the 2010–2014 period and $984 billion over the 2010–2019 period. This estimate is based on the projected prices of allowances for both the GHG and HFC cap-and-trade programs.

However, the cost of purchasing allowances, whether from the government or from other entities that would receive allowances under the bill, would become an additional business expense for companies that would have to comply with that cap on emissions. Those additional expenses would result in a decrease in taxable income, resulting in a loss of government revenue from income and payroll taxes referred to as a "revenue offset." The amount of this revenue offset would be equal to 25 percent—an approximate marginal tax rate on overall economic activity—of the gross receipts from the auction and free allocation of allowances.[9]

Depending on the manner in which the proceeds or allowances are used by the government or conveyed to private entities, this reduction in taxable income (the revenue offset) might be accompanied by a matching increase in taxable income elsewhere in the economy. In such cases, CBO views the distribution of allowances

[9] Two previous letters on this subject can be found on CBO's Web site at: http://www.cbo.gov/ftpdocs/102xx/doc10236/BartonCapnTradeLtr.pdf and http://www.cbo.gov/ftpdocs/102xx/doc10232/5-15-WaxmanLetter.pdf

or allowance proceeds as offsetting the revenue offset—that is, compensating for the initial loss of tax revenues associated with the acquisition of the allowances. In those cases, the distribution and use of the allowances or the auction proceeds would be budget neutral. For this estimate, CBO applied this offsetting offset to some of the revenues arising from the distribution of allowances, depending on who would receive those allowances (or auction proceeds) and what they would be used for.

In general, allowances provided under section 111 of division B to businesses (merchant coal generators, generators with long-term power purchase agreements, petroleum refiners), and some of the allowances provided to natural gas distributors would fit in the category of transactions that would be budget neutral because they would generate taxable income. In contrast, allowances provided to nonbusiness entities—such as states to support specific activities, or to other countries to support efforts to reduce greenhouse gases—would not be budget neutral because they would not generate taxable income.

CBO estimates that the auction of GHG and HFC allowances would generate revenues, net of income and payroll tax offsets, of about $76 billion over the 2010–2014 period and about $235 billion over the next 10 years. We also estimate that the distribution of GHG allowances at no cost would generate revenues, net of income and payroll tax offsets, of about $175 billion over the 2012–2014 period and about $625 billion over the 2012–2019 period (see memorandum to Table 4).

Other revenues

Increased Use of Accelerated Tax Depreciation and Business Tax Credits. By encouraging electricity production using renewable resources, enacting S. 1733 would result in an increase in the use of certain federal tax incentives. Those incentives include both accelerated depreciation of certain assets and tax credits available to firms that invest in specific forms of renewable energy. When calculating taxable profits, businesses depreciate (that is, deduct over time) the cost of acquiring fixed investment property—namely, plant and equipment. For tax purposes, businesses are generally allowed a greater degree of accelerated depreciation—earlier deductions than would occur if they measured the actual wearing out of the property—for certain types of fixed investments used to produce electricity from renewable resources, such as wind and solar equipment, than they are allowed for investments to produce electricity from fossil fuels. By bringing about faster growth in the amount of electricity produced from renewable resources, S. 1733 would result in increased business tax deductions and reduced tax receipts.

In addition, S. 1733 would result in firms claiming a greater amount of business tax credits for the renewable electricity production credit (section 45 of the Internal Revenue Code) and the energy credit that applies primarily to investments in solar and geothermal energy production (section 48 of the Internal Revenue Code). JCT estimates that the increased use of accelerated depreciation and business tax credits would reduce revenues by about $14 billion over the 2010–2019 period.

Carbon Storage Research Corporation. Section 125 would authorize utilities that distribute fossil fuels to establish, by a referendum involving members of the electricity distribution industry, a Carbon Storage Research Corporation. The corporation would levy annual assessments on distribution utilities based on the volume of certain electricity deliveries to retail consumers. While formation of the corporation would be voluntary, once it was created, assessments would be compulsory, enforced by the federal government's sovereign authority. As such, CBO believes the corporation should be considered governmental in nature, amounts collected from the assessments should be recorded in the budget as revenues, and subsequent expenditures should be considered direct spending.

TABLE 4.—ESTIMATED CHANGES IN REVENUES AND DIRECT SPENDING UNDER S. 1733

	By fiscal year, in billions of dollars											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010–2014	2010–2019
CHANGES IN REVENUES												
Net Revenues Resulting from Cap-and-Trade Programs [1]	0	9.1	69.3	78.0	94.7	105.4	112.4	123.5	130.6	136.5	251.1	859.5
Increased Use of Accelerated Tax Depreciation and Business Tax Credits	0	0	−0.1	−0.3	−0.7	−1.2	−1.8	−2.5	−3.4	−4.2	−1.1	−14.1
Carbon Storage Research Corporation	0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.8	8.6
Penalties and Other Revenue Changes	0	0	*	*	*	*	*	*	*	*	0.1	0.2
Total Changes in Revenues	0	10.0	70.2	78.6	95.0	105.3	111.6	122.0	128.2	133.3	253.9	854.2
CHANGES IN DIRECT SPENDING												
Spending of Auction Proceeds [2]												
Estimated Budget Authority	0	7.9	17.5	18.4	19.4	21.5	23.3	23.8	24.7	25.7	63.3	182.2
Estimated Outlays	0	0.3	6.7	14.8	17.2	19.2	21.3	23.0	23.7	24.6	39.1	150.9
Outlays Associated with Emission Allowances Freely Allocated:												
Estimated Budget Authority	0	0	53.7	60.9	75.7	83.6	88.2	98.7	103.7	108.6	190.2	673.0
Estimated Outlays	0	0	53.7	60.9	75.7	83.6	88.2	98.7	103.7	108.6	190.2	673.0
Carbon Storage Research Corporation:												
Estimated Budget Authority	0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	4.4	10.2
Estimated Outlays	0	0.3	0.7	1.0	1.1	1.2	1.2	1.2	1.2	1.2	3.1	8.9
Total Changes in Direct Spending:.												
Estimated Budget Authority	0	9.0	72.3	80.4	96.2	106.3	112.6	123.6	129.6	135.4	257.9	865.4
Estimated Outlays	0	0.6	61.1	76.7	93.9	104.0	110.7	122.8	128.6	134.4	232.4	832.8
NET CHANGE IN THE BUDGET DEFICIT FROM CHANGES IN REVENUES AND DIRECT SPENDING												
Impact on Deficit [3]	0	9.3	9.1	1.9	1.1	1.3	0.9	−0.8	−0.4	−1.1	21.4	21.4
Memorandum—Details on Auction Revenues:												
Gross Revenues from Auctioned Allowances	0	12.1	27.3	29.5	32.0	37.2	40.5	41.8	44.6	46.4	100.9	311.4
Net Revenues from Auctioned Allowances	0	9.1	20.6	22.3	24.1	28.1	30.5	31.4	33.5	34.9	76.1	234.5
Gross Revenues from Allowances Freely Allocated	0	0	53.7	60.9	75.7	83.6	88.2	98.7	103.7	108.6	190.2	673.0
Net Revenues from Allowances Freely Allocated	0	0	48.7	55.7	70.5	77.4	81.9	92.1	97.1	101.6	175.0	625.0

[1] Revenues are net of income and payroll tax offsets.
[2] Includes $0.1 billion savings in unemployment benefits over the 2010–2019 period.
[3] Positive numbers indicate decreases in deficits; negative numbers indicate increases in deficits.
Notes: * = between −$50 million and $50 million.
Numbers may not sum to totals because of rounding.

For this estimate, CBO assumes that the corporation would be created and would collect assessments totaling about $1.0 billion (the minimum allowed under the bill) in 2011 and $1.1 billion (the maximum allowed under the bill) each year thereafter. Authority to levy assessments and conduct operations would terminate 10 years and 6 months after enactment.

The cost of those assessments would become an additional business expense for utilities, resulting in a loss of other federal tax revenue (primarily income and payroll taxes). The amount of this revenue loss would be equal to about 25 percent of the assessments. However, half of the funds collected by the corporation would go back to electric utilities in the form of grants to subsidize the operations of existing electricity generation units that use integrated CCS or conversion. Those grants would generate new taxable income which would increase federal revenues. Consequently, the net loss in tax revenue would equal about one-eighth of the income from the assessments, resulting in an overall increase in revenues from this provision of $3.8 billion over the 2010–2014 period and $8.6 billion over the next 10 years.

Penalties. Under S. 1733, civil penalties would be assessed on those owners and operators who fail to meet their compliance obligation on time. The penalty would equal the volume of emissions generated by an entity in excess of the allowances it held multiplied by twice the fair market value of an emission allowance in the relevant year. In addition, the covered entities would be required to submit, in the following year or other time period determined by EPA, emission allowances to cover excess emissions from the previous year. The legislation also would establish penalties for those entities that violate any of the rules associated with the regulation of the allowance market. Such penalties could be as high $1 million per day under certain circumstances. This legislation also includes various other penalties, including penalties for nonpayment of allowances and for fraud.

Because many of the penalties could be substantial, CBO expects most firms would comply with the requirements of the bill. However, the number of entities covered by this legislation is large, and thus it is likely that some entities would not comply. Penalties collected on emissions of sulfur dioxide and nitrogen oxides in excess of submitted allowances under EPA's Acid Rain Program, a similar program, are usually small, though there have been two large collections over the past few years totaling about $4 million. Based on that information, CBO estimates that penalty collections under S. 1733 would total between $25 million and $50 million annually, beginning in 2012.

Effect on Unemployment Compensation. The bill would create a program to compensate workers who lose their jobs as a result of the bill's provisions. That program would provide cash benefits, job training, and a subsidy for health care costs. Individuals who collect benefits under that program would not be eligible to receive unemployment compensation; consequently, outlays of that program would be reduced. Because such outlays are financed by state employment taxes, CBO estimates that states would reduce their taxes (which are recorded as revenues on the federal budget) accordingly. Over the 2012–2019 period, CBO estimates that the reduction in tax revenues would be less than $100 million.

Direct spending

CBO estimates that enacting this legislation would increase direct spending by $833 billion over the 2010–2019 period. Outlays would primarily stem from spending of auction proceeds and giving GHG allowances to states and other entities free of charge.

Spending of Auction Proceeds. Revenues from the auction of emission allowances for the GHG cap-and-trade program would be deposited into 10 new funds established by the legislation. Spending from those funds would not require any further appropriation action. CBO's estimate of direct spending by funds over the 2010–2019 period includes:

- The Energy Refund Account (outlays of $112 billion) would provide financial assistance to low- and moderate-income households and is intended to offset the impact of the bill on energy prices;
- The Climate Change Transportation Fund (outlays of $16 billion) would enable the Department of Transportation (DOT) to provide grants to states to support activities that would reduce GHG emissions;
- The Supplemental Agriculture, Abandoned Mine Land, Renewable Energy, and Forestry Fund (outlays of $9 billion) would enable the Department of Agriculture and the Department of the Interior (DOI) to establish programs supporting agricultural and forestry projects that reduce or sequester GHGs;
- The Worker Transition Fund (outlays of $4 billion) would enable the Department of Labor (DOL) to provide assistance to workers who lose their jobs as a result of the measures their employers take to comply with the provisions of the bill;
- The Natural Resources Climate Change Adaptation Account (outlays of $4 billion) would enable DOI and other federal agencies to support state adaptation activities, including activities to protect fish and wildlife, reduce the risk of wildfires, and maintain and restore coastal habitats and ecosystems;
- The Clean Vehicle Technology Fund (outlays of $3 billion) would enable EPA to provide grants to manufacturers and component suppliers to refurbish or expand existing manufacturing facilities to produce advanced technology vehicles and to support engineering integration of certain vehicles and components, and to enable DOE to provide support for a national transportation low-emission energy plan;
- The Energy Efficiency and Renewable Energy Worker Training Fund (outlays of $1 billion) would enable DOE to provide funding for grants to support training for jobs in the energy-efficiency industry and a national research program;
- The Nuclear Worker Training Fund (outlays of $1 billion) would enable DOE and DOL to provide grants and other support for workforce development and training related to nuclear energy;
- The Climate Change Health Protection and Promotion Fund (outlays of $1 billion) would enable the Department of Health and Human Services (HHS) to implement a national strategic action plan to respond to the impact of climate change on health; and

- The Consumer Rebate Fund (deposits would be made to this fund beginning in 2026) would provide financial relief to consumers affected by the bill's provisions.

Outlays Associated with Emission Allowances Freely Allocated. CBO estimates that direct spending would increase by $673 billion over the 2010–2019 period when the government distributes emission allowances free of charge to various recipients. Most of this distribution would begin in 2012. Recipients, such as states, natural gas distributers, and federal agencies, would use the allowances to fund programs to encourage energy efficiency and other types of government initiatives.

Carbon Storage Research Corporation. As previously discussed in the section on revenues, S. 1733 would authorize a governmental corporation to levy and spend assessments on distribution utilities totaling between $1.0 billion and $1.1 billion a year over the 2010–2019 period. Under the bill, the corporation could invest those assessments in interest-bearing securities, thereby generating additional funding for its activities. As a result, collections would total $10.2 billion over the 2010–2019 period. Expenditures of assessments and interest, which would be considered direct spending, would support research and development of technologies related to CCS. Based on historical spending patterns for similar activities, CBO estimates that expenditures by the proposed corporation would total $8.9 billion over the 2010–2019 period.

Spending subject to appropriation

Assuming appropriation of the necessary amounts, CBO estimates that implementing this legislation would increase discretionary spending by about $29 billion over the 2010–2019 period (see Table 5). Most of that amount would stem from spending of revenues from the HFC auction of consumption allowances. Additional spending would result from spending to support federal agencies' costs to administer programs established under the bill and to support various grant programs and other activities related to energy efficiency and clean energy technologies.

Stratospheric Ozone and Climate Protection Fund. Under the legislation, about $22.9 billion in revenues from the auction of consumption allowances over the 2012–2019 period would be credited to the Stratospheric Ozone and Climate Protection Fund. CBO estimates that outlays from this fund would total about $19 billion over the 2012–2019 period. Those proceeds would be used to support DOE's best-in-class appliances deployment program, an EPA program to encourage the recovery, recycling, and reclamation of HFCs, and any multilateral agreement related to HFCs that includes the United States.

TABLE 5.—ESTIMATED SPENDING SUBJECT TO APPROPRIATION UNDER S. 1733

	By fiscal year, In billions of dollars—											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2010–2014	2010–2019
CHANGES IN SPENDING SUBJECT TO APPROPRIATION												
Spending of Proceeds from Stratospheric Ozone and Climate Protection Fund:												
Estimated Authorization Level	0	0	0.6	1.0	1.3	3.0	3.3	3.6	5.0	5.0	2.9	22.9
Estimated Outlays	0	0	0.2	0.7	1.1	2.0	2.9	3.4	4.1	4.8	2.0	19.1
Administrative Costs to Federal Agencies:												
Estimated Authorization Level	0.5	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	2.5	5.4
Estimated Outlays	0.1	0.3	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	1.9	4.7
Clean Energy and Energy-Efficiency Programs:												
Estimated Authorization Level	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.7	3.4	6.5
Estimated Outlays	0.1	0.4	0.6	0.6	0.7	0.6	0.5	0.5	0.6	0.6	2.3	5.1
Total Changes:												
Estimated Authorization Level	1.1	1.1	1.9	2.2	2.5	4.1	4.5	4.8	6.2	6.3	8.9	34.8
Estimated Outlays	0.1	0.6	1.3	1.8	2.3	3.1	4.0	4.5	5.2	6.0	6.1	28.9

Note: Numbers may not sum to totals because of rounding.

Administrative Costs of Federal Agencies. Several federal agencies, including EPA, DOL, DOE, and others would be responsible for administering programs under S. 1733. In total, CBO estimates that fully funding administrative costs of federal agencies would require appropriations totaling about $500 million in 2010 and $5.4 billion over the 2010–2019 period. A significant portion of the estimated costs would be incurred by EPA to administer the proposed GHG cap-and-trade program, including roughly a 5 percent increase in personnel. Such personnel would be responsible for developing regulations, preparing rulemakings, assessments, and studies, distributing proceeds generated from the auctions, and other activities related to the cap-and-trade program. Other agencies would be responsible for supporting various programs and activities funded by the distribution of revenues from the auction of allowances and the freely allocated allowances. Those programs include advanced energy research, international clean-energy programs, and worker transition assistance. The agencies supporting those types of programs would incur costs for additional personnel, contractors, and information technology. Those cost estimates are primarily based on information from EPA and other federal agencies and on historical information about how large regulatory programs have been implemented. CBO estimates that spending for administrative costs would total about $5 billion over the 2010–2019 period.

Clean Energy and Energy-Efficiency Programs. S. 1733 would establish new programs and requirements aimed at promoting clean energy and supporting energy efficiency. CBO estimates that fully funding those activities, which would be implemented primarily by EPA would require appropriations totaling $6.5 billion over the 2010–2019 period. That amount includes:

- $2.0 billion to support grants for reducing emissions of black carbon;
- $500 million to fund grants for research and development efforts and production of biofuels;
- $1.7 billion to support water-efficient products, buildings, landscapes, and processes; and
- $2.3 billion for various studies and grant programs related to climate change and renewable energy.

Assuming appropriation of the necessary amounts, CBO estimates that implementing clean energy and energy-efficiency programs under S. 1733 would cost about $5 billion over the 2010–2019 period, with additional spending occurring in later years.

Budgetary impacts after 2019

Under this legislation, both cap-and-trade programs would be permanent. The cap for the HFC cap-and-trade program would level off beginning in 2032, and that for the GHG cap-and-trade program would level off beginning in 2050. Most federal spending associated with the GHG cap-and-trade program would begin in the early years of the program and end by 2050 or earlier. Although spending from the energy refund account would be permanent, spending from the consumer rebate fund would begin in 2027 and end in 2050.

Intergovernmental and private-sector impact: S. 1733 contains intergovernmental and private-sector mandates as defined in the

Unfunded Mandates Reform Act. Several of those mandates would require utilities, manufacturers, and other entities to reduce greenhouse gas emissions through cap-and-trade programs and performance standards. CBO estimates that the aggregate cost of mandates in the bill would significantly exceed the annual thresholds established in UMRA for intergovernmental and private-sector mandates ($69 million and $139 million in 2009, respectively, adjusted annually for inflation).

Mandates that apply to both public and private entities

Cap-and-Trade Program for Greenhouse Gases. The cap-and-trade program for GHG emissions (excluding HFCs) would require covered facilities to submit one allowance per metric ton of carbon dioxide equivalent emitted beginning in 2012. The compliance costs for covered facilities would be the expenditures made in acquiring allowances, the cost of purchasing offset credits, and the cost of directly reducing their emissions of GHGs. Based on estimates of those costs and accounting for the initial allocation of free allowances, CBO estimates that the annual cost of this requirement would amount to tens of billions of dollars for private-sector entities and hundreds of millions of dollars for public entities.

Although not available to cover the mandate costs of the cap-and-trade requirements, at least $60 billion in allowances would be provided to states over the 2012–2016 period for specific purposes, including programs for improving energy efficiency, implementing regulations, and supporting other climate change programs (see additional discussion under "Other Impacts on State and Local Governments" below).

Reporting Requirements. Public and private entities also would be required to report information on greenhouse gases to a federal registry. Most public entities and some private entities will be required to report similar information under current law, and therefore the public sector would incur minimal additional costs. However, more private-sector entities would be required to report information on greenhouse gases to the registry under the bill. Based on information about compliance costs from EPA's impact analysis of the current reporting requirement, CBO estimates that the cost for private entities could increase by about $30 million per year.

The bill also would impose reporting requirements on public and private entities to assist with implementing the cap-and-trade program. CBO estimates that the cost to comply with those mandates would be small.

Carbon Capture and Sequestration Assessments. The bill would authorize the Carbon Storage Research Corporation to levy annual assessments on public and private utilities following a referendum by the affected utilities. The funds collected, along with an allocation of emission allowances, would be used to support the development of technologies related to CCS. The bill also would require state regulatory authorities to indicate whether they support or oppose the creation of the corporation. If the referendum is approved, all utilities would be required to pay the assessments. The assessments would be based on the amount of electricity delivered to retail customers, and would generate between $1.0 billion and $1.1 billion annually. CBO estimates the annual cost would total

$150 million for public utilities and $850 million for private utilities in the first year the mandate is in effect. CBO estimates that the annual cost of the assessments would increase to a total of $175 million for public utilities and $925 million for private utilities in subsequent years. The cost of the requirement to regulatory authorities would be small.

Performance Standards for Coal-Fueled Power Plants. The bill would establish performance standards for new sources of power from coal power plants. Those requirements would compel owners and operators of new units of electric generation (EGUs) to reduce annual CO_2 emissions and would apply to both public and private power plants. EGUs would be required to reduce annual emissions of CO_2 by 50 percent or 65 percent, depending on when the EGU received a preconstruction permit. Because CBO cannot determine how EGUs would comply with the mandate, CBO has no basis to estimate the cost.

Energy Building Codes. The bill would give EPA the authority to issue new energy efficiency standards for state and local codes relating to residential and commercial buildings. If EPA were to issue such regulations, those requirements would be mandates on both public entities that would have to implement and enforce the new standards and private entities that would have to comply. Because most states already have processes to review and update their building codes, the costs of the new requirements are not expected to be large. Furthermore, the bill would provide about $2 billion in allowances to states over the first five years for implementing building codes. Because the stringency of the building codes would depend on future regulatory action, CBO has no basis for estimating the costs to the private sector of complying with this mandate.

Other Mandates. The bill contains additional mandates that would affect both public and private entities. Those mandates include requirements governing the repair of air conditioners in motor vehicles and requirements for the geological storage of CO_2. CBO estimates that the costs of those mandates would not be significant during the first five years the mandates are in effect. The bill would authorize EPA to propose regulations to reduce emissions of black carbon or to publish a finding that existing regulations adequately control such emissions. Because the costs to comply with the new standards would depend on future regulatory action, CBO has no basis for estimating the cost of the mandates.

Mandates that apply to public entities only

Preemptions of State and Local Authority. S. 1733 contains preemptions of state and local authority. Because preemptions limit the authority of state and local governments, they are considered intergovernmental mandates under UMRA.

- Section 861 would preempt state authority to enforce a cap-and-trade program that covers any capped emissions during the years 2012 through 2017. The Regional Greenhouse Gas Initiative (RGGI) and the State of California plan to conduct allowance auctions during those years. Based on previous RGGI auction revenues, CBO estimates the cost of this preemption to be several hundred million dollars annually. Depending on the design of the Cali-

fornia program, however, the cost of this preemption could be significantly higher.

• Section 619 would preempt state laws relating to the production and import of certain hydrofluorocarbons. CBO estimates the cost of this preemption to be small.

Procurement of Water-Efficient Products. The bill would require the District of Columbia to purchase certain products and services designated to be water efficient by EPA or DOE. Because the District of Columbia is the only jurisdiction required to procure such products and the cost associated with the mandate would be the additional cost of the water-efficient products relative to the cost of the products already being purchased, CBO estimates the cost of the mandate to be small.

Other impacts on state and local governments

The bill would provide allowances to state, local, and tribal governments for a number of specific purposes. The largest such allocation could be used for energy efficiency programs, retrofits for commercial and residential buildings, programs to deploy renewable energy facilities, constructing new electricity transmission lines, weatherization projects, and smart grid projects. Other allowance allocations would be available for natural resource and domestic adaptation, infrastructure improvements, transportation planning, worker training programs, building code adoption, and programs to benefit low-income consumers of home heating oil or propane. CBO estimates that the allowances would total at least $60 billion through 2016.

In addition, the bill would authorize several grant programs for renewable energy production, workforce training, research initiatives, and energy efficiency. Those grant programs would benefit participating state, local, and tribal governments, and any costs would be incurred voluntarily as a condition of receiving federal assistance.

Mandates that apply to private entities only

Hydrofluorocarbon Restrictions. The cap-and-trade program for HFCs would require any entity that produces or imports HFCs, or imports a product containing HFCs, to submit one consumption allowance or destruction offset credit per $mtCO_2e$ of HFC beginning in 2012. The direct cost would be equal to the cost of purchasing allowances and offset credits, and the cost of reducing the use of HFCs. The bill also would impose several other requirements for the use of HFCs, including restrictions on HFCs used in refrigeration and labeling and reporting requirements.

Based on the price of consumption allowances established in the bill, CBO estimates that the cost of purchasing allowances would amount to about $600 million in the first year the mandates are in effect and more in subsequent years.

Mobile Emissions Standards. The bill would direct EPA to establish standards for greenhouse gas emissions from new heavy-duty vehicles and engines by December 31, 2010. The bill also would direct EPA to establish standards for classes of new nonroad vehicles and engines with significant emissions of greenhouse gases by December 31, 2012. The bill would direct EPA to issue standards that reflect the best available technology. Because the strin-

gency of the standards would depend on future regulatory action, the costs of the mandates are uncertain.

Previous CBO estimates: On June 5, 2009, CBO transmitted a cost estimate for H.R. 2454, the American Clean Energy and Security Act of 2009, as ordered reported by the House Committee on Energy and Commerce on May 21, 2009. H.R. 2454 also would establish cap-and-trade programs for GHGs and HFCs. CBO and JCT estimate that over the 2010–2019 period enacting that version of H.R. 2454 would increase federal revenues by about $846 billion and increase direct spending by about $821 billion, reducing the budget deficits over that period by about $24 billion. In addition, assuming appropriation of the necessary amounts, CBO estimates that implementing H.R. 2454 would increase discretionary spending by about $50 billion over the 2010–2019 period.

In addition, on June 26, 2009, CBO transmitted a cost estimate for H.R. 2454 as passed by the House of Representatives on the same day. CBO and JCT estimate that over the 2010–2019 period, that version of the legislation would increase federal revenues by about $873 billion and increase direct spending by about $864 billion, reducing budget deficits over that period by about $9 billion. For that version of the legislation, CBO did not complete an estimate of the legislation's estimated impact on discretionary spending.

H.R. 2454, as passed by the House, is similar to S. 1733; however, there are some significant differences that result in the lower estimates of revenues and direct spending under S. 1733. In addition, differences between the two versions of the legislation account for higher allowance prices under S. 1733. Significant differences between the pieces of legislation are addressed below.

Estimate of revenues

Under H.R. 2454 as passed by the House, advance auctions of future emission allowances would occur beginning in 2014. Those auctions would result in the collection of additional revenues over the 2012–2019 period. S. 1733 does not include such advance auctions.

Estimate of direct spending

Several energy-related provisions in H.R. 2454, as passed by the House, that CBO estimated would increase direct spending (such as the renewable-electricity standard and the establishment of a Clean Energy Deployment Administration) are not included in S. 1733. Also contributing to lower spending under the Senate bill are the different amounts of proceeds from allowance auctions that are not spent. Under S. 1733, over the 2010–2019 period, 10 percent of the allowances are auctioned annually as part of the initial reservation and proceeds stemming from those sales are deposited in the Treasury and are not available for spending. Under H.R. 2454, as passed by the House, auction proceeds from more than 10 percent of the allowances available in each of the first two years of the program could not be spent. In the following eight years, however, the amount of allowance auction proceeds that could not be spent would drop to less than 1 percent.

Allowance prices

CBO estimates that prices for emission allowances would be about 15 percent higher under S. 1733 than under H.R. 2454, as passed by the House, because S. 1733:

- Contains a more stringent emissions cap in 2014 and between 2017 and 2029;
- Contains different allocations for distributing emission allowances and auction revenues; and
- Places greater restrictions on the amount of international offsets that can be used towards an entity's compliance obligation.

Emissions Cap. For most years, S. 1733 and H.R. 2454, as passed by the House, include identical emissions caps and generally cover the same entities. However, in 2014 and between 2017 and 2029, S. 1733 has a more stringent cap that is between 1 percent and 4 percent lower than the cap under the other legislation. Beginning in 2030, both versions of the legislation include the same cap on emissions. The tighter cap under S. 1733 would result in a slightly higher allowance price.

Allocation of Emissions Allowances and Auction Revenues. Both H.R. 2454, as passed by the House, and S. 1733 would allocate allowances and auction revenue to support various programs. Although many of those programs and recipients of allowances are the same in each piece of legislation, the amounts of those allocations are in some cases larger or smaller. Under S. 1733, more allowances are set aside for a reserve fund in the event that allowance prices become volatile, which effectively tightens the cap further. Also, fewer allowances are dedicated to energy efficiency under S. 1733, resulting in a slightly higher allowance price. In addition, the number of allowances allocated for CCS bonuses would be smaller, which slightly increases projected allowance prices under S. 1733.

Offsets. The offset provisions in S. 1733 are different from those in H.R. 2454, as passed by the House. In both bills, offsets may substitute for 2 billion allowances. However, the use of international offsets would be more limited in S. 1733 than in H.R. 2454. In S. 1733, international offsets could substitute for between 500 million and 1.25 billion of allowances per year depending on the use of domestic offsets. That difference raises projected allowance prices under S. 1733 by about 10 percent above those under H.R. 2454.

Mandates

H.R. 2454 would impose intergovernmental and private-sector mandates similar to those contained in S. 1733 by requiring utilities, manufacturers, and other entities to reduce greenhouse gas emissions through cap-and-trade programs and performance standards. H.R. 2454 also contains standards related to energy efficiency and renewable energy that are not contained in S. 1733. CBO estimates that the aggregate cost of mandates in both bills would significantly exceed the annual thresholds established in UMRA for intergovernmental and private-sector mandates ($69 million and $139 million in 2009, respectively, adjusted annually for inflation).

Estimate prepared by: Federal revenues: Mark Booth, Pamela Greene, and Edward Harris. Federal costs; Susanne S. Mehlman

and Daniel Hoople (cap-and-trade programs), Christi Hawley Anthony (Department of Labor); Allowance prices: Rob Johansson, Robert G. Shackleton Jr., Natalie Tawil, and Terry Dinan; Impact on state, local, and tribal governments: Ryan Miller; Impact on the private sector: Amy Petz and Brian Prest.

Estimate approved by: Theresa Gullo, Deputy Assistant Director for Budget Analysis; Frank J. Sammartino, Assistant Director for Tax Analysis; Joseph Kile, Assistant Director for Microeconomic Studies.

MINORITY VIEWS OF SENATORS INHOFE, VOINOVICH, VITTER, BARRASSO, CRAPO, BOND, AND ALEXANDER

S. 1733, the Clean Energy Jobs and American Power Act, should be opposed and returned to the Committee on Environment and Public Works by the full Senate. It is the view of all Minority Members that both Committee Rules and long established Committee precedent were violated when the Committee considered and favorably reported the substitute amendment to S. 1733 on November 4th 2009. In addition, we believe the Committee failed to address the important issues associated with a comprehensive cap-and-trade system to control greenhouse gases. By favorably reporting the substitute amendment without a full and complete economic or environmental analysis on the impacts the legislation will have on both the U.S. economy and global greenhouse gas emissions, Members did not have the ability to determine an accurate measure of the bill's costs or environmental impacts. Legislation of this magnitude should not go forward until the Committee and the Senate receives comprehensive analysis on its costs and benefits.

We also object to the legislation advancing on procedural grounds. The procedural argument originates from the Standing Rules of the Senate. Under the Standing Rules for Committee Procedure, Rule XXVI Section 7(a)(1), each committee, and each subcommittee thereof, is authorized to fix the number of its members who shall constitute a quorum for the transaction of such business as may be considered. We note that the Committee on Environment and Public Works' Rule 2(a) has set the requirements for a quorum to include two minority members and that this rule is not inconsistent with the Rules of the Senate.[1] Specifically, Rule 2(a) requires one third of the members of the Committee, at least two of whom are members of the minority party, to constitute a quorum. At the business meeting to consider S. 1733, only one Minority Member was in attendance at any given time, therefore prohibiting the Committee from conducting business.

In addition, although the Chairman indicated she could favorably report S. 1733 through her interpretation of Committee Rule 2(d) regarding reporting, her interpretation does not represent the long-

[1] Rules of the Committee on Environment and Public Works, United States Senate.
RULE 2. QUORUMS.
(a) BUSINESS MEETINGS: At committee business meetings, and for the purpose of approving the issuance of a subpoena or approving a committee resolution, one third of the members of the committee, at least two of whom are members of the minority party, constitute a quorum, except as provided in subsection (d).
(b) SUBCOMMITTEE MEETINGS: At subcommittee business meetings, a majority of the subcommittee members, at least one of whom is a member of the minority party, constitutes a quorum for conducting business.
(c) CONTINUING QUORUM: Once a quorum as prescribed in subsections (a) and (b) has been established, the committee or subcommittee may continue to conduct business.
(d) REPORTING: No measure or matter may be reported to the Senate by the committee unless a majority of committee members cast votes in person.
(e) HEARINGS: One member constitutes a quorum for conducting a hearing.

established precedent of this Committee regarding both the letter and spirit of the Rules. The Minority members continue to interpret Rule 2(a) as defining a quorum for business meetings. While Rule 2(d) defines what is needed to report a matter, we note that this Rule has not been historically defined as expanding Rule 2(a). Rather, this Rule refers to final passage for reporting, rather than replacing the quorum requirement necessary to begin to conduct business or hold a business meeting. It is meant to modify the one-third requirement, not the two from the minority. If not, the tradition of protecting minority views is discarded and the "two minority members" language rendered meaningless.

The requirement for each committee to adopt its own set of rules was passed in 1970. The rules of the EPW Committee for each Congress since then, beginning in the 92nd Congress (1971–72), have required the presence of minority party members to constitute a quorum at business meetings. That first set of rules required one member. The next Congress required two, and most rules since then have been consistent with two. The rules of the 107th Congress actually required three. The language contained in Rule 2(d)—in which a majority of the committee must be physically present to report measures—first appeared in 1995 (104th Congress). Prior to that, the quorum requirement referred to exceptions to allow for fewer members to constitute a quorum at subcommittee meetings (still needing a minority party presence) and at hearings.

Further, we believe the Majority violated their own interpretation of the Rules. Under the Chairman's interpretation, a bill could be introduced and passed without any minority member's participation, making the quorum requirement meaningless. However, we note that according to the Congressional Record from November 5th, and the legislative history in this Committee Report, the legislation that was reported out of Committee was an amendment in the nature of a substitute. Under the Chairman's interpretation, amendments could only be made at a business meeting. Since two minority members were not present, a business meeting could not take place and the only matter to be acted upon should have been a vote on S. 1733, as introduced.

In addition to violating the Committee and Senate Rules, the act of reporting this bill without the requisite number of Minority Members present establishes a dangerous precedent for this Committee. Back in 2003, the minority at the time did not participate in the nomination hearing of Gov. Mike Leavitt. The minority argued that Gov. Leavitt had not answered questions for the record to their satisfaction, and they boycotted the hearing. The Majority at the time honored the Rules of this Committee and worked with the minority until an accommodation could be made. Despite its differences of opinion on both sides, the Committee operated in a fair and open manner. Another example is Clear Skies legislation. In that instance, the markup spanned two Congresses over two years and was delayed three times to accommodate the requests of the Minority seeking time for review of the impacts of the legislation—which, it should be noted, are not nearly as comprehensive and economy wide as the effects of S. 1733.

As noted earlier, EPA did not run the full economic modeling of S. 1733. The Administrator of the EPA, Lisa Jackson, clearly stated

on October 27, 2009, in a legislative hearing of this committee on S. 1733, that "we have not run the full economic modeling [of S. 1733]". Rather it conducted a "meta-analysis" comparing the legislation to that of the analysis done on H.R. 2454, the House-passed legislation. We believe this meta-analysis is insufficient first and foremost because it rests upon a flawed analysis of HR. 2454. The H.R. 2454 analysis did not make realistic assumption scenarios regarding the development and deployment of new nuclear power plants and carbon capture and sequestration technology, as well as the expected price of natural gas and the potential for biomass. That analysis also did not include the multiple mandates and requirements contained in the legislation. It also did not use in its reference case the Administration's 2009 Budget that assumes 3.3% annual growth in GDP. Finally, it did not model various levels of CO_2 reductions taken by developing countries such as China and India, and the effect they would have on global CO_2 concentrations. (Further reasoning for the insufficiency of these brief modeling runs are outlined in Senator Voinovich's letter to Lisa Jackson dated November 3, 2009, attached to these views.)

Further, we believe a full analysis would provide details that an EPA summary discussion paper does not. Among these are regional analysis, including costs to the Midwest, South, and Plains that will be different—and likely more expensive—than the national average because of regional dependence on coal-fired generation; analysis of the effects on consumers from higher electricity, gasoline, and natural gas prices; analysis of impacts on jobs, especially in the manufacturing sector; analysis of fuel costs on farmers; and technology analysis exploring the availability of new technology such as carbon capture and sequestration or deployment of nuclear power.

Finally, an analysis is warranted because of the substantial differences between S. 1733 and H.R. 2454, which include: a steeper target of 20% emissions cuts in 2020 (instead of H.R. 2454's 17%); smaller consumer and worker protection programs; less protection against high program costs through offset programs; and less protection against high program costs through a reserve fund. For these and other reasons, EPA should conduct full modeling to provide members an accurate and comprehensive assessment of the bill's impacts on the economy.

Again we urge that S. 1733 should be opposed and returned to the Committee on Environment and Public Works Committee by the full Senate until proper analysis is conducted and Committee rules are followed.

JAMES INHOFE.
GEORGE V. VOINOVICH.
DAVID VITTER.
JOHN BARRASSO.
MIKE CRAPO.
KIT BOND.
LAMAR ALEXANDER.

ADDITIONAL VIEWS OF SENATOR MAX BAUCUS

S. 1733, the Clean Energy Jobs and American Power Act, addresses one of the most challenging issues of our time—global climate change. Climate change has the potential to severely impact our environment and our economy. The effects of climate change are visible in Montana, even today. Whether it is our green forests turned red by pine bark beetles, the namesake of Glacier National Park melting away, or sustained drought and increased wildfires, we are seeing the impacts firsthand.

We will also see the impacts of climate legislation firsthand. Montana has much to gain and much to lose from the transition to a clean energy economy, if it is not properly structured. For example, the Department of Energy estimates that Montana's wind energy potential ranges from good to excellent to superb. But, we lack some of the transmission infrastructure required to carry that renewable resource to market. Our state's agriculture and tourism economies depend on healthy natural resources. S. 1733 includes a strong natural resource adaptation package that would provide resources to help sustain our tourism and recreation economy by protecting our outdoor heritage.

Our state's vast coal reserves have been the lifeblood of our nation's electricity generation system for decades, providing low sulfur coal that allows coal-fired utilities to meet tough clean air standards. Coal is our nation's most plentiful, low-cost input for generating electricity, but unless we take steps to develop clean coal technology, we run the risk of excluding coal from our energy mix in the next century—a risk we cannot afford. S. 1733 would advance the development of clean coal technology. Specifically, the bill provides for advance payment of bonus allowances to a greater number of carbon capture and storage (CCS) projects, thus speeding the commercial deployment of this technology and reducing investment risk. It establishes a performance standard for new coal-fired power plants, and creates a reasonable early triggering mechanism for that standard to take effect based on the deployment of CCS technology.

The reductions contemplated by S. 1733, particularly the mid-term reduction target, is too high given what we know today. That is why I offered an alternative that would create a 17 percent target in 2020 with a trigger taking that target up to 20 percent, if certain conditions regarding emissions reductions in the international community were met. The offset provisions in this bill also take some steps forward in terms of providing incentives for agriculture providers to sequester carbon, but the structure of the system itself needs to be stronger. Finally, the EPA's authority under the Clean Air Act to regulate greenhouse gas emissions is partially addressed in S. 1733, but the full scope of that issue must be clarified to provide regulatory certainty.

While I opposed S. 1733, as a member of the EPW and Agriculture Committees, as Chairman of the Senate Finance Committee, and most importantly, as a Montanan who wants our children and grandchildren to be able to enjoy the outdoors the way we can today, I'm going to work to get climate change legislation that can get 60 votes, get through the United States Senate, and signed into law. The Senate must craft a bill that will create jobs throughout the nation. We will craft a bill that will protect both Yosemite and Yellowstone. We will craft a bill that increases our national security by decreasing our dependence on foreign oil. And ultimately, we will craft a bill that will secure America's economic and environmental future for generations.

MAX BAUCUS.

CHANGES IN EXISTING LAW

In compliance with section 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill as reported are shown as follows: Existing law proposed to be omitted is enclosed in [black brackets], new matter is printed in *italic*, existing law in which no change is proposed is shown in roman:

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CLEAN AIR ACT

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TITLE I—AIR POLLUTION PREVENTION AND CONTROL

PART A—AIR QUALITY AND EMISSION LIMITATIONS

FINDINGS AND PURPOSES

SEC. 101. (a) * * *

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SEC. 108. (a)(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after the date of enactment of the Clean Air Amendments of 1970 publish, and shall from time to time thereafter revise, a list which includes each air pollutant—

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before the date of enactment of the Clean Air Amendments of 1970, but for which he plans to issue air quality criteria under this section.

(2) The Administrator shall issue air quality criteria for an air pollutant within 12 months after he has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on—

(A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

(B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

(C) any known or anticipated adverse effects on welfare.

(3) PROHIBITION ON LISTING OF GREENHOUSE GASES.—On and after the date of enactment of this paragraph, the Administrator shall not include on the list of pollutants under this subsection any greenhouse gas on the basis of any effect the greenhouse gas may have on climate change.

SEC. 112. HAZARDOUS AIR POLLUTANTS.

(a) DEFINITIONS.—For purposes of this section, except subsection (r)—

(1) MAJOR SOURCE.—The term "major source" means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. The Administrator may establish a lesser quantity, or in the case of radionuclides different criteria, for a major source than that specified in the previous sentence, on the basis of the potency of the air pollutant, persistence, potential for bioaccumulation, other characteristics of the air pollutant, or other relevant factors.

(2)* * *

* * * * * * *

(20) GREENHOUSE GAS LIMITATION.—No greenhouse gas may be added to the list of hazardous air pollutants under this section unless the greenhouse gas meets the criteria described in subsection (b) independent of the effects of the greenhouse gas on climate change.

SEC. 113. FEDERAL ENFORCEMENT.

(a) * * *

* * * * * * *

(3) EPA ENFORCEMENT OF OTHER REQUIREMENTS.—Except for a requirement or prohibition enforceable under the preceding provisions of this subsection, whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any other requirement or prohibition of this title, section 303 of title III, title IV, title V, [or title VI]*title VI, title VII, or title VIII* including, but not limited to, a requirement or prohibition of any rule, plan, order, waiver, or permit promulgated, issued, or approved under those provisions or titles, or for the payment of any fee owed to the United States under this Act (other than title II), the Administrator may—

* * * * * * *

(b) CIVIL JUDICIAL ENFORCEMENT.—The Administrator shall, as appropriate, in the case of any person that is the owner or operator of an affected source, a major emitting facility, [or a major stationary source]*a major stationary source, or a covered EGU under title VIII*, and may, in the case of any other person, commence a

civil action for a permanent or temporary injunction, or to assess and recover a civil penalty of not more than $25,000 per day for each violation, or both, in any of the following instances:

(1) Whenever such person has violated, or is in violation of, any requirement or prohibition of an applicable implementation plan or permit. Such an action shall be commenced (A) during any period of federally assumed enforcement, or (B) more than 30 days following the date of the Administrator's notification under subsection (a)(1) that such person has violated, or is in violation of, such requirement or prohibition.

(2) Whenever such person has violated, or is in violation of, any other requirement or prohibition of this title, section 303 of title III, title IV, title V, [or title VI]*title VI, title VII, or title VIII*, including, but not limited to, a requirement or prohibition of any rule, order, waiver or permit promulgated, issued, or approved under this Act, or for the payment of any fee owed the United States under this Act (other than title II).

* * * * * * *

(c) CRIMINAL PENALTIES.—(1) Any person who knowingly violates any requirement or prohibition of an applicable implementation plan (during any period of federally assumed enforcement or more than 30 days after having been notified under subsection (a)(1) by the Administrator that such person is violating such requirement or prohibition), any order under subsection (a) of this section, requirement or prohibition of section 111(e) of this title (relating to new source performance standards), section 112 of this title, section 114 of this title (relating to inspections, etc.), section 129 of this title (relating to solid waste combustion), section 165(a) of this title (relating to preconstruction requirements), an order under section 167 of this title (relating to preconstruction requirements), an order under section 303 of title III (relating to emergency orders), section 502(a) or 503(c) of title V (relating to permits), or any requirement or prohibition of title IV (relating to acid deposition control), [or title VI (relating to stratospheric ozone control),]*title VI, title VII, or title VIII,* including a requirement of any rule, order, waiver, or permit promulgated or approved under such sections or titles, and including any requirement for the payment of any fee owed the United States under this Act (other than title II) shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not to exceed 5 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

(2) Any person who knowingly—

(A)* * *

* * * * * * *

(3) Any person who knowingly fails to pay any fee owed the United States under this title, title III, IV, V, [or VI]*VI, VII, or VIII* shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 1 year, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such

person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

* * * * * * *

(d) ADMINISTRATIVE ASSESSMENT OF CIVIL PENALTIES.—(1) The Administrator may issue an administrative order against any person assessing a civil administrative penalty of up to $25,000, per day of violation, whenever, on the basis of any available information, the Administrator finds that such person—

(A) has violated or is violating any requirement or prohibition of an applicable implementation plan (such order shall be issued (i) during any period of federally assumed enforcement, or (ii) more than thirty days following the date of the Administrator's notification under subsection (a)(1) of this section of a finding that such person has violated or is violating such requirement or prohibition); or

(B) has violated or is violating any other requirement or prohibition of title I, III, IV, V, [or VI]*VI, VII, or VIII* including, but not limited to, a requirement or prohibition of any rule, order, waiver, permit, or plan promulgated, issued, or approved under this Act, or for the payment of any fee owed the United States under this Act (other than title II); or

* * * * * * *

(f) AWARDS.—The Administrator may pay an award, not to exceed $10,000, to any person who furnishes information or services which lead to a criminal conviction or a judicial or administrative civil penalty for any violation of this title or title III, IV, V, [or VI]*VI, VII, or VII* of this Act enforced under this section. Such payment is subject to available appropriations for such purposes as provided in annual appropriation Acts. Any officer, or employee of the United States or any State or local government who furnishes information or renders service in the performance of an official duty is ineligible for payment under this subsection. The Administrator may, by regulation, prescribe additional criteria for eligibility for such an award.

INSPECTIONS, MONITORING, AND ENTRY

SEC. 114. (a) For the purpose (i) of developing or assisting in the development of any implementation plan under section 110 or 111(d), any standard of performance under section 111,ANy emission standard under [section 112, or any regulation of solid waste combustion under section 129, or any regulation under section 129 (relating to solid waste combustion), (ii)]*section 112, or any regulation of greenhouse gas emissions under title VII or VIII, (ii)* of determining whether any person is in violation of any such standard or any requirement of such a plan, or (iii) carrying out any provision of this Act (except a provision of title II with respect to a manufacturer of new motor vehicles or new motor vehicle engines)—

* * * * * * *

(d)(1)* * *

* * * * * * *

(e) RECORDKEEPING FOR CARBON OFFSETS PROGRAM.—For the purpose of implementing the carbon offsets program set forth in subtitle D of title VII, the Administrator shall require any person who is an offset project developer, and may require any person who is a third party verifier, to establish and maintain records, for a period of not less than the crediting period under section 734(c) plus 5 years, relating to—

(1) any offset project approval petition submitted to the appropriate officials under section 735;

(2) any reversals which occur with respect to an offset project;

(3) any verification reports; and

(4) any other aspect of the offset project that the appropriate officials determines is appropriate.

* * * * * * *

SEC. 115. (a) Whenever the Administrator, upon receipt of reports, surveys or studies from any duly constituted international agency has reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of State alleges is of such a nature, the Administrator shall give formal notification thereof to the Governor of the State in which such emissions originate.

(b) The notice of the Administrator shall be deemed to be a finding under section 110(a)(2)(H)(ii) which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment referred to in subsection (a). Any foreign country so affected by such emission of pollutant or pollutants shall be invited to appear at any public hearing associated with any revision of the appropriate portion of the applicable implementation plan.

[(c) This section]

(3) APPLICABILITY.—

(A) FOREIGN COUNTRIES.—*This section* shall apply only to a foreign country which the Administrator determines has given the United States essentially the same rights with respect to the prevention or control of air pollution occurring in that country as is given that country by this section.

(B) GREENHOUSE GASES.—*This section does not apply to any greenhouse gas with respect to the effects of the greenhouse gas on climate change.*

* * * * * * *

RETENTION OF STATE AUTHORITY

SEC. 116. Except as otherwise provided in sections 119 (c), (e), and (f) (as in effect before the date of the enactment of the Clean Air Act Amendments of 1977), 209, 211(c)(4), [and 233]*233* (preempting certain State regulation [of moving sources)]*of moving sources), and 861 (preempting certain State greenhouse gas programs for a limited time)* nothing in this Act shall preclude or deny

the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution; except that if an emission standard or limitation is in effect under an applicable implementation plan or under section 111 or 112, such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan or section. *For the purposes of this section, the phrases 'standard or limitation respecting emissions of air pollutants' and 'requirements respecting control or abatement of air pollution' shall include any provision to: limit greenhouse gas emissions, require surrender to the State or a political subdivision thereof of emission allowances or offset credits established or issued under this Act, and require the use of such allowances or credits as a means of demonstrating compliance with requirements established by a State or political subdivision thereof.*

* * * * * * *

SEC. 169. For purposes of this part—

(1) The term "major emitting facility" means any of the following stationary sources of air pollutants which emit, or have the potential to emit, one hundred tons per year or more of any air pollutant,*(other than any greenhouse gas), and 25,000 tons per year of carbon dioxide equivalent for any greenhouse gas or combination of greenhouse gases* from the following types of stationary sources: fossil-fuel fired steam electric plants of more than two hundred and fifty million British thermal units per hour heat input, coal cleaning plants (thermal dryers), kraft pulp mills, Portland Cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than fifty tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process) primary lead smelters, fuel conversion plants, sintering plants, secondary metal production facilities, chemical process plants, fossil-fuel boilers of more than two hundred and fifty million British thermal units per hour heat input, petroleum storage and transfer facilities with a capacity exceeding three hundred thousand barrels, taconite ore processing facilities, glass fiber processing plants, charcoal production facilities. Such term also includes any other source with the potential to emit two hundred and fifty tons per year or more of any air pollutant*(other than any greenhouse gas), and 25,000 tons per year of carbon dioxide equivalent for any greenhouse gas or combination of greenhouse gases*. This term shall not include new or modified facilities which are nonprofit health or education institutions which have been exempted by the State.

* * * * * * *

SEC. 201

TITLE II—EMISSION STANDARDS FOR MOVING SOURCES

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SEC. 202. (a) Except as otherwise provided in subsection (b)—
(1)* * *

* * * * * * *

SEC. 209. (a) * * *

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(f) TAXICABS.—(1) Notwithstanding subsection (a), a State or political subdivision thereof may adopt and enforce standards for the control of emissions from new motor vehicles that are taxicabs and other vehicles if such standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards and if such taxicabs and other vehicles—

(A) are passenger motor vehicles that are capable of transporting not more than 10 individuals, including the driver;

(B) are commercially available or are designed and manufactured pursuant to a contract with such State or political subdivision thereof;

(C) are operated for hire pursuant to an operating or regulatory license, permit, or other authorization issued by such State or political subdivision thereof;

(D) provide local transportation for a fare determined on the basis of the time or distance traveled or a combination of time and distance traveled; and

(E) do not exclusively provide transportation to and from airports.

(2) If each standard of a State or political subdivision thereof is at least as stringent as the comparable applicable Federal standard, such standard of such State or political subdivision thereof shall be deemed at least as protective of health and welfare as such Federal standards for purposes of this subsection.

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SEC. 211. (a) * * *

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(o) RENEWABLE FUEL PROGRAM.—
(1) DEFINITIONS.—In this section:
(A) CELLULOSIC BIOMASS ETHANOL.—* * *

* * * * * * *

(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.
(ii) INCLUSIONS.—The types of fuels eligible for consideration as "advanced biofuel" may include any of the following:
(I) Ethanol derived from cellulose, hemicellulose, or lignin.
(II) Ethanol derived from sugar or starch (other than corn starch).

(III) Ethanol derived from waste material, including crop residue, other vegetative waste material, animal waste, and food waste and yard waste.

(IV) Biomass-based diesel.

(V) Biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass.

(VI) Butanol or other alcohols produced through the conversion of organic matter from renewable biomass.

(VII) Other fuel derived from [cellulosic biomass]*advanced green*.

* * * * * * *

(C) ADVANCED GREEN BIOFUEL.—The term 'advanced green biofuel' means renewable fuel that—

(i) is derived from renewable biomass; and

(ii) has lifecycle greenhouse gas emissions that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

[(C)]*(D)* 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)]*(E)* BIOMASS-BASED DIESEL.—The term "biomass-based diesel" means renewable fuel that is biodiesel as defined in section 312(f) of the Energy Policy Act of 1992 (42 U.S.C. 13220(f)) 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.]

(2) RENEWABLE FUEL PROGRAM.—

(A) REGULATIONS.—

(i) IN GENERAL.—Not later than 1 year after the date of enactment of this paragraph, the Administrator shall promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains the applicable volume of renewable fuel determined in accordance

with subparagraph (B). Not later than 1 year after the date of enactment of this sentence, the Administrator shall revise the regulations under this paragraph to ensure that transportation fuel sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains at least the applicable volume of renewable fuel, advanced biofuel, [cellulosic]*advanced green* biofuel, and biomass-based diesel, determined in accordance with subparagraph (B) and, in the case of any such renewable fuel produced from new facilities that commence construction after the date of enactment of this sentence, achieves at least a 20 percent reduction in lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions.

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(B) APPLICABLE VOLUMES.—

(i) CALENDAR YEARS AFTER 2005.—* * *

* * * * * * *

(III) [Cellulosic]*Advanced Green* biofuel.—For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of [cellulosic]*advanced green* biofuel for the calendar years 2010 through 2022 shall be determined in accordance with the following table:

Applicable volume of [cellulosic]*advanced green* **biofuel**

* * * * * * *

(ii) OTHER CALENDAR YEARS.—For the purposes of subparagraph (A), the applicable volumes of each fuel specified in the tables in clause (i) for calendar years after the calendar years specified in the tables shall be determined by the Administrator, in coordination with the Secretary of Energy and the Secretary of Agriculture, based on a review of the implementation of the program during calendar years specified in the tables, and an analysis of—

(I) the impact of the production and use of renewable fuels on the environment, including on air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply;

(II) the impact of renewable fuels on the energy security of the United States;

(III) the expected annual rate of future commercial production of renewable fuels, including advanced biofuels in each category ([cellulosic]*advanced green* biofuel and biomass-based diesel);

* * * * * * *

(iv) APPLICABLE VOLUME OF [CELLULOSIC]*ADVANCED GREEN* BIOFUEL.—For the purpose of making the deter-

minations in clause (ii), for each calendar year, the applicable volume of [cellulosic]*advanced green* biofuel established by the Administrator shall be based on the assumption that the Administrator will not need to issue a waiver for such years under paragraph (7)(D).

* * * * * * *

(3) APPLICABLE PERCENTAGES.—

(A) PROVISION OF ESTIMATE OF VOLUMES OF GASOLINE SALES.—Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and [cellulosic]*advanced green* biofuel projected to be sold or introduced into commerce in the United States.

(B) DETERMINATION OF APPLICABLE PERCENTAGES.—

(i) * * *

* * * * * * *

(4) MODIFICATION OF GREENHOUSE GAS REDUCTION PERCENTAGES.—

(A) IN GENERAL.—The Administrator may, in the regulations under the last sentence of paragraph (2)(A)(i), adjust the 20 percent, 50 percent, and 60 percent reductions in lifecycle greenhouse gas emissions specified in paragraphs (2)(A)(i) (relating to renewable fuel), (1)(D) (relating to biomass-based diesel), (1)(B)(i) (relating to advanced biofuel), and (1)(E) (relating to [cellulosic]*advanced green* biofuel) to a lower percentage. For the 50 and 60 percent reductions, the Administrator may make such an adjustment only if he determines that generally such reduction is not commercially feasible for fuels made using a variety of feedstocks, technologies, and processes to meet the applicable reduction.

(B) AMOUNT OF ADJUSTMENT.—In promulgating regulations under this paragraph, the specified 50 percent reduction in greenhouse gas emissions from advanced biofuel and in biomass-based diesel may not be reduced below 40 percent. The specified 20 percent reduction in greenhouse gas emissions from renewable fuel may not be reduced below 10 percent, and the specified 60 percent reduction in greenhouse gas emissions from [cellulosic]*advanced green* biofuel may not be reduced below 50 percent.

* * * * * * *

(7) WAIVERS.—

(A) * * *

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(D) [CELLULOSIC]*ADVANCED GREEN* BIOFUEL.—(i) For any calendar year for which the projected volume of [cellulosic]*advanced green* biofuel production is less than the minimum applicable volume established under paragraph (2)(B), as determined by the Administrator based on

the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, the Administrator shall reduce the applicable volume of **[**cellulosic**]***advanced green* biofuel required under paragraph (2)(B) to the projected volume available during that calendar year. For any calendar year in which the Administrator makes such a reduction, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(ii)* * *

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SEC. 301. (a)(1)* * *

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SEC. 304.(a) * * *

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(f) For purposes of this section, the term "emission standard or limitation under this Act" means—

(1) a schedule or timetable of compliance, emission limitation, standard of performance or emission standard,

(2) a control or prohibition respecting a motor vehicle fuel or fuel additive, which is in effect under this Act (including a requirement applicable by reason of section 118) or under an applicable implementation plan, or

(3) any condition or requirement of a permit under part C of title I (relating to significant deterioration of air quality) or part D of title I (relating to nonattainment),section 119 (relating to primary nonferrous smelter orders), any condition or requirement under an applicable implementation plan relating to transportation control measures, air quality maintenance plans, vehicle inspection and maintenance programs or vapor recovery requirements, section 211 (e) and (f) (relating to fuels and fuel additives), section 169A (relating to visibility protection), any condition or requirement under title VI (relating to ozone protection), or any requirement under section 111 or 112 (without regard to whether such requirement is expressed as an emission standard or otherwise)**[**; or**]***,*

(4) any other standard, limitation, or schedule established under any permit issued pursuant to title V or under any applicable State implementation plan approved by the Administrator, any permit term or condition, and any requirement to obtain a permit as a condition of operations**[**.**]***; or*

(5) any requirement of title VII or VIII.

* * * * * * *

GENERAL PROVISIONS RELATING TO ADMINISTRATIVE PROCEEDINGS AND JUDICIAL REVIEW

GENERAL PROVISIONS RELATING TO ADMINISTRATIVE PROCEEDINGS AND JUDICIAL REVIEW

SEC. 307. (a) In connection with any determination under section 110(f), or for purposes of obtaining information under section

202(b)(4) or 211(c)(3),,[1] any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the[2] Act (including but not limited to section 113, section 114, section 120, section 129, section 167, section 205, section 206, section 208, section 303**[**, or section 306**]** *section 306, or title VII or VIII*), the Administrator may issue subpenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of title 18 of the United States Code, except that such paper, book, document, or information may be discussed to other officers, employees, or authorized representatives of the United States concerned with carrying out this Act, to persons carrying out the National Academy of Sciences' study and investigation provided for in section 202(c), or when relevant in any proceeding under this Act. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In cases of contumacy or refusal to obey a subpena served upon any person under this subparagraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b)(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 112, any standard of performance or requirement under section 111**[**,,**]**,[1] any standard under section 202 (other than a standard required to be prescribed under section 202(b)(1)), any determination under section 202(b)(5), any control or prohibition under section 211, any standard under section 231, any rule issued under section 113, 119, or under **[**section 120,**]***section 120, any final action under title VII or VIII,* or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this Act may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 110 or section 111(d), any order under section 111(j), under section 112**[**,,**]**,[2] under section 119, or under sec-

[1] Amendment made by section 703 of Public Law 101–549 (104 Stat. 2681) resulted in double commas.

[2] Probably should read "this Act".

[1] Public Law 95–95 inserted the additional comma after the words "under section 111".

[2] Section 706(2) of Public Law 101–549 (104 Stat. 2682) inserted the additional comma after the words "under section 112,".

tion 120, or his action under section 119(c)(2) (A), (B), or (C) (as in effect before the date of enactment of the Clean Air Act Amendments of 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 114(a)(3) of this Act, or any other final action of the Administrator under this Act (including any denial or disapproval by the Administrator under title I) which is local or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit.*Any person may file a petition for review of action by the Administrator as provided in this subsection.* Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

(c) In any judicial proceeding in which review is sought of a determination under this Act required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as to[1] the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(3) If the court determines that any action of the Administrator is arbitrary, capricious, or otherwise unlawful, the court may remand such action, without vacatur, if vacatur would impair or

[1] So in original. The word "to" probably should not appear.

delay protection of the environment or public health or otherwise undermine the timely achievement of the purposes of this Act.

(4) If the court determines that any action of the Administrator is arbitrary, capricious, or otherwise unlawful, and remands the matter to the Administrator, the Administrator shall complete final action on remand within an expeditious time period not longer than the time originally allowed for the action or 1 year, whichever is less, unless the court on motion determines that a shorter or longer period is necessary, appropriate, and consistent with the purposes of this Act. The court of appeals shall have jurisdiction to enforce a deadline for action on remand under this paragraph.

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(d)(1) This subsection applies to—

(A) * * *

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[(S) the promulgation or revision of any regulation under title IV (relating to acid deposition),**]**

(S) the promulgation or revision of any regulation under title VII or VIII,

* * * * * * *

(7)(A) The record for judicial review shall consist exclusively of the material referred to in paragraph (3), clause (i) of paragraph (4)(B), and subparagraphs (A) and (B) of paragraph (6).

(B) Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed.*If a petition for reconsideration is filed, the Administrator shall take final action on such petition, including promulgation of final action either revising or determining not to revise the action for which reconsideration is sought, within 150 days after the petition is received by the Administrator or the petition shall be deemed denied for the purpose of judicial review. Such person may seek judicial review of such denial, or of any other final action, by the Administrator, in response to a petition for reconsideration, in the United States court of appeals for the appropriate circuit (as provided in subsection (b)).* If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b)). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

TITLE V—PERMITS

SEC. 501. DEFINITIONS.

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SEC. 508. EMISSIONS OF GREENHOUSE GASES.

Notwithstanding any provision of this title or title III, no stationary source shall be required to apply for, or operate pursuant to, a permit under this title solely because the stationary source, including an agricultural source, emits less than 25,000 tons per year of any greenhouse gas or combination of greenhouse gases that are regulated solely because of the effect of those gases on climate change.

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TITLE VI—STRATOSPHERIC OZONE PROTECTION

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SEC. 605. PHASE-OUT OF PRODUCTION AND CONSUMPTION OF CLASS II SUBSTANCES.

(a) RESTRICTION OF USE OF CLASS II SUBSTANCES.—Effective January 1, 2015, it shall be unlawful for any person to introduce into interstate commerce or use any class II substance unless such substance—

(1) has been used, recovered, and recycled;

(2) is used and entirely consumed (except for trace quantities) in the production of other chemicals; **[**or**]**

(3) is used as a refrigerant in appliances manufactured prior to January 1, 2020**[**.**]***; or*

As used in this subsection, the term "refrigerant" means any class II substance used for heat transfer in a refrigerating system.

(4) is listed as acceptable for use as a fire suppression agent for nonresidential applications in accordance with section 612(c).

SEC. 608. NATIONAL RECYCLING AND EMISSION REDUCTION PROGRAM.

(a) IN GENERAL.—(1) * * *

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(c) PROHIBITIONS.—(1) Effective July 1, 1992, it shall be unlawful for any person, in the course of maintaining, servicing, repairing, or disposing of an appliance or industrial process refrigeration, to knowingly vent or otherwise knowingly release or dispose of any class I or class II substance used as a refrigerant in such appliance (or industrial process refrigeration) in a manner which permits such substance to enter the environment. De minimis releases associated with good faith attempts to recapture and recycle or safely dispose of any such substance shall not be subject to the prohibition set forth in the preceding sentence.

(2) Effective 5 years after the enactment of the Clean Air Act Amendments of 1990, paragraph (1) shall also apply to the venting, release, or disposal of any substitute substance for a class I or class II substance by any person maintaining, servicing, repairing, or disposing of an appliance or industrial process refrigeration which contains and uses as a refrigerant any such substance, unless the Administrator determines that venting, releasing, or disposing of such substance does not pose a threat to the environment. For purposes of this paragraph, the term "appliance" includes any device which contains and uses as a refrigerant a substitute substance and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer.

(3) CONTAINERS OF CLASS I AND CLASS II SUBSTANCES.—

(A) DEFINITION OF REFILLABLE CONTAINER.—In this paragraph, the term 'refillable container' means a container that is designed to be refilled.

(B) REGULATIONS.—Not later than 2 years after the date of enactment of this paragraph, the Administrator shall revise regulations promulgated under this section to require that only a refillable container may be used to hold 20 pounds or more of a class I substance or class II substance.

SEC. 609. SERVICING OF MOTOR VEHICLE AIR CONDITIONERS.

(a) REGULATIONS.—Within 1 year after the enactment of the Clean Air Act Amendments of 1990, the Administrator shall promulgate regulations in accordance with this section establishing standards and requirements regarding the servicing of motor vehicle air conditioners.

(b) * * *

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(e) SMALL CONTAINERS OF CLASS I OR CLASS II*, group I, group I* Substances.—Effective 2 years after the date of the enactment of the Clean Air Act Amendments of 1990, it shall be unlawful for any person to sell or distribute, or offer for sale or distribution, in interstate commerce to any person (other than a person performing service for consideration on motor vehicle air-conditioning systems in compliance with this section) any class I or class II*, group I* substance that is suitable for use as a refrigerant in a motor vehicle air-conditioning system and that is in a container which contains less than 20 pounds of such refrigerant.

(f) CLASS II, GROUP II SUBSTANCES.—

(1) REPAIR.*—The Administrator may promulgate regulations establishing requirements for repair of motor vehicle air conditioners prior to adding a class II, group II substance.*

(2) SMALL CONTAINERS.—*(A) The Administrator may promulgate regulations establishing servicing practices and procedures for recovery of class II, group II substances from containers which contain less than 20 pounds of such class II, group II substances.*

(B) Not later than 18 months after enactment of this subsection, the Administrator shall either promulgate regulations requiring that containers which contain less than 20 pounds of a class II, group II substance be equipped with a device or technology that limits refrigerant emissions and leaks from the container and limits refrigerant emissions and leaks during the transfer of refrigerant from the container to the motor vehicle air conditioner or issue a determination that such requirements are not necessary or appropriate.

(C) Not later than 18 months after enactment of this subsection, the Administrator shall promulgate regulations establishing requirements for consumer education materials on best practices associated with the use of containers which contain less than 20 pounds of a class II, group II substance and prohibiting the sale or distribution, or offer for sale or distribution, of any class II, group II substance in any container which contains less than 20 pounds of such class II, group II substance, unless consumer education materials consistent with such requirements are displayed and available at point-of-sale locations, provided to the consumer, or included in or on the packaging of the container which contain less than 20 pounds of a class II, group II substance.

(D) The Administrator may, through rulemaking, extend the requirements established under this paragraph to containers which contain 30 pounds or less of a class II, group II substance if the Administrator determines that such action would produce significant environmental benefits.

(3) RESTRICTION OF SALES.—Effective January 1, 2014, no person may sell or distribute or offer to sell or distribute or otherwise introduce into interstate commerce any motor vehicle air conditioner refrigerant in any size container unless the substance has been found acceptable for use in a motor vehicle air conditioner under section 612.

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SEC. 612. SAFE ALTERNATIVES POLICY.

(a) * * *

* * * * * * *

(e) STUDIES AND NOTIFICATION.—The Administrator shall require any person who produces a chemical substitute for a class I *or class II* substance to provide the Administrator with such person's unpublished health and safety studies on such substitute and require producers to notify the Administrator not less than 90 days before new or existing chemicals are introduced into interstate commerce for significant new uses as substitutes for a class I *or class II* substance. This subsection shall be subject to section 114(c).

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SEC. 618. MISCELLANEOUS PROVISIONS.

For purposes of section 116, requirements concerning the areas addressed by this title for the protection of the stratosphere against ozone layer depletion shall be treated as requirements for the control and abatement of air pollution. For purposes of section 118, the requirements of this title and corresponding State, interstate, and local requirements, administrative authority, and process, and sanctions respecting the protection of the stratospheric ozone layer shall be treated as requirements for the control and abatement of air pollution within the meaning of section 118.

SEC. 619. HYDROFLUOROCARBONS (HFCS).

(a) TREATMENT AS CLASS II, GROUP II SUBSTANCES.—Except as otherwise provided in this section, hydrofluorocarbons shall be treated as class II substances for purposes of applying the provisions of this title. The Administrator shall establish two groups of class II substances. Class II, group I substances shall include all hydrochlorofluorocarbons (HCFCs) listed pursuant to section 602(b). Class II, group II substances shall include each of the following:

(1) Hydrofluorocarbon-23 (HFC–23).
(2) Hydrofluorocarbon-32 (HFC–32).
(3) Hydrofluorocarbon-41 (HFC–41).
(4) Hydrofluorocarbon-125 (HFC–125).
(5) Hydrofluorocarbon-134 (HFC–134).
(6) Hydrofluorocarbon-134a (HFC–134a).
(7) Hydrofluorocarbon-143 (HFC–143).
(8) Hydrofluorocarbon-143a (HFC–143a).
(9) Hydrofluorocarbon-152 (HFC–152).
(10) Hydrofluorocarbon-152a (HFC–152a).
(11) Hydrofluorocarbon-227ea (HFC–227ea).
(12) Hydrofluorocarbon-236cb (HFC–236cb).
(13) Hydrofluorocarbon-236ea (HFC–236ea).
(14) Hydrofluorocarbon-236fa (HFC–236fa).
(15) Hydrofluorocarbon-245ca (HFC–245ca).
(16) Hydrofluorocarbon-245fa (HFC–245fa).
(17) Hydrofluorocarbon-365mfc (HFC–365mfc).
(18) Hydrofluorocarbon-43-10mee (HFC–43–10mee).
(19) Hydrofluoroolefin-1234yf (HFO–1234yf).
(20) Hydrofluoroolefin-1234ze (HFO–1234ze).

Not later than 6 months after the date of enactment of this title, the Administrator shall publish an initial list of class II, group II substances, which shall include the substances listed in this subsection. The Administrator may add to the list of class II, group II substances any other substance used as a substitute for a class I or II substance if the Administrator determines that 1 metric ton of the substance makes the same or greater contribution to global warming over 100 years as 1 metric ton of carbon dioxide. Within 24 months after the date of enactment of this section, the Administrator shall amend the regulations under this title (including the regulations referred to in sections 603, 608, 609, 610, 611, 612, and 613) to apply to class II, group II substances.

(b) CONSUMPTION AND PRODUCTION OF CLASS II, GROUP II SUBSTANCES.—

(1) IN GENERAL.—

(A) CONSUMPTION PHASE DOWN.—In the case of class II, group II substances, in lieu of applying section 605 and the regulations thereunder, the Administrator shall promulgate regulations phasing down the consumption of class II, group II substances in the United States, and the importation of products containing any class II, group II substance, in accordance with this subsection within 18 months after the date of enactment of this section. Effective January 1, 2012, it shall be unlawful for any person to produce any class II, group II substance, import any class II, group II substance, or import any product containing any class II, group II substance without holding one consumption allowance or one destruction offset credit for each carbon dioxide equivalent ton of the class II, group II substance. Any person who exports a class II, group II substance for which a consumption allowance was retired may receive a refund of that allowance from the Administrator following the export.

(B) PRODUCTION.—If the United States becomes a party or otherwise adheres to a multilateral agreement, including any amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer, that restricts the production of class II, group II substances, the Administrator shall promulgate regulations establishing a baseline for the production of class II, group II substances in the United States and phasing down the production of class II, group II substances in the United States, in accordance with such multilateral agreement and subject to the same exceptions and other provisions as are applicable to the phase down of consumption of class II, group II substances under this section (except that the Administrator shall not require a person who obtains production allowances from the Administrator to make payment for such allowances if the person is making payment for a corresponding quantity of consumption allowances of the same vintage year). Upon the effective date of such regulations, it shall be unlawful for any person to produce any class II, group II substance without holding one consumption allowance and one production allowance, or one destruction offset credit, for each carbon dioxide equivalent ton of the class II, group II substance.

(C) INTEGRITY OF LIMITS.—To maintain the integrity of the class II, group II limits, the Administrator may, through rulemaking, limit the percentage of each person's compliance obligation that may be met through the use of destruction offset credits or banked allowances.

(D) COUNTING OF VIOLATIONS.—Each consumption allowance, production allowance, or destruction offset credit not held as required by this section shall be a separate violation of this section.

(2) SCHEDULE.—Pursuant to the regulations promulgated pursuant to paragraph (1)(A), the number of class II, group II consumption allowances established by the Administrator for each calendar year beginning in 2012 shall be the following percentage of the baseline, as established by the Administrator pursuant to paragraph (3):

Calendar Year	Percent of Baseline
2012	90
2013	87.5
2014	85
2015	82.5
2016	80
2017	77.5
2018	75
2019	71
2020	67
2021	63
2022	59
2023	54

Calendar Year	Percent of Baseline
2024	50
2025	46
2026	42
2027	38
2028	34
2029	30
2030	25
2031	21
2032	17
after 2032	15

(3) BASELINE.—(A) Not later than 1 year after the date of enactment of this section, the Administrator shall promulgate regulations to establish the baseline for purposes of paragraph (2). The baseline shall be the sum, expressed in metric tons of carbon dioxide equivalents, of—

(i) the annual average consumption of all class II substances in calendar years 2004, 2005, and 2006; plus

(ii) the annual average quantity of all class II substances contained in imported products in calendar years 2004, 2005, and 2006.

(B) Notwithstanding subparagraph (A), if the Administrator determines that the baseline is higher than 370 million metric tons of carbon dioxide equivalents, then the Administrator shall establish the baseline at 370 million metric tons of carbon dioxide equivalents.

(C) Notwithstanding subparagraph (A), if the Administrator determines that the baseline is lower than 280 million metric tons of carbon dioxide equivalents, then the Administrator shall establish the baseline at 280 million metric tons of carbon dioxide equivalents.

(4) DISTRIBUTION OF ALLOWANCES.—

(A) IN GENERAL.—Pursuant to the regulations promulgated under paragraph (1)(A), for each calendar year beginning in 2012, the Administrator shall sell consumption allowances in accordance with this paragraph.

(B) ESTABLISHMENT OF POOLS.—The Administrator shall establish two allowance pools. Eighty percent of the consumption allowances available for a calendar year shall be placed in the producer-importer pool, and 20 percent of the consumption allowances available for a calendar year shall be placed in the secondary pool.

(C) PRODUCER-IMPORTER POOL.—

(i) AUCTION.—(I) For each calendar year, the Administrator shall offer for sale at auction the following percentage of the consumption allowances in the producer-importer pool:

Calendar Year	Percent Available for Auction
2012	10
2013	20
2014	30
2015	40
2016	50
2017	60
2018	70
2019	80
2020 and thereafter	90

(II) Any person who produced or imported any class II substance during calendar year 2004, 2005, or 2006 may participate in the auction. No other persons may participate in the auction unless permitted to do so pursuant to subclause (III).

(III) Not later than 3 years after the date of the initial auction and from time to time thereafter, the Administrator shall determine through rulemaking whether any persons who did not produce or import a class II substance during calendar year 2004, 2005, or 2006 will be permitted to participate in future auctions. The Administrator shall base this determination on the duration, consistency, and scale of such person's purchases of consumption allowances in the secondary pool under subparagraph (D)(ii)(III), as well as economic or technical hardship and other factors deemed relevant by the Administrator.

(IV) The Administrator shall set a minimum bid per consumption allowance of the following:

(aa) For vintage year 2012, $1.00.

(bb) For vintage year 2013, $1.20.

(cc) For vintage year 2014, $1.40.

(dd) For vintage year 2015, $1.60.

(ee) For vintage year 2016, $1.80.

(ff) For vintage year 2017, $2.00.

(gg) For vintage year 2018 and thereafter, $2.00 adjusted for inflation after vintage year 2017 based upon the producer price index as published by the Department of Commerce.

(ii) NON-AUCTION SALE.—(I) For each calendar year, as soon as practicable after auction, the Administrator shall offer for sale the remaining consumption allowances in the producer-importer pool at the following prices:

(aa) A fee of $1.00 per vintage year 2012 allowance.

(bb) A fee of $1.20 per vintage year 2013 allowance.

(cc) A fee of $1.40 per vintage year 2014 allowance.

(dd) For each vintage year 2015 allowance, a fee equal to the average of $1.10 and the auction clearing price for vintage year 2014 allowances.

(ee) For each vintage year 2016 allowance, a fee equal to the average of $1.30 and the auction clearing price for vintage year 2015 allowances.

(ff) For each vintage year 2017 allowance, a fee equal to the average of $1.40 and the auction clearing price for vintage year 2016 allowances.

(gg) For each allowance of vintage year 2018 and subsequent vintage years, a fee equal to the auction clearing price for that vintage year.

(II) The Administrator shall offer to sell the remaining consumption allowances in the producer-importer

pool to producers of class II, group II substances and importers of class II, group II substances in proportion to their relative allocation share.

(III) Such allocation share for such sale shall be determined by the Administrator using such producer's or importer's annual average data on class II substances from calendar years 2004, 2005, and 2006, on a carbon dioxide equivalent basis, and—

(aa) shall be based on a producer's production, plus importation, plus acquisitions and purchases from persons who produced class II substances in the United States during calendar year 2004, 2005, or 2006, less exportation, less transfers and sales to persons who produced class II substances in the United States during calendar year 2004, 2005, or 2006; and

(bb) for an importer of class II substances that did not produce in the United States any class II substance during calendar years 2004, 2005, and 2006, shall be based on the importer's importation less exportation.

For purposes of item (aa), the Administrator shall account for 100 percent of class II, group II substances and 60 percent of class II, group I substances. For purposes of item (bb), the Administrator shall account for 100 percent of class II, group II substances and 100 percent of class II, group I substances.

(IV) Any consumption allowances made available for nonauction sale to a specific producer or importer of class II, group II substances but not purchased by the specific producer or importer shall be made available for sale to any producer or importer of class II substances during calendar year 2004, 2005, or 2006. If demand for such consumption allowances exceeds supply of such consumption allowances, the Administrator shall develop and utilize criteria for the sale of such consumption allowances that may include pro rata shares, historic production and importation, economic or technical hardship, or other factors deemed relevant by the Administrator. If the supply of such consumption allowances exceeds demand, the Administrator may offer such consumption allowances for sale in the secondary pool as set forth in subparagraph (D).

(D) SECONDARY POOL.—(i) For each calendar year, as soon as practicable after the auction required in subparagraph (C), the Administrator shall offer for sale the consumption allowances in the secondary pool at the prices listed in subparagraph (C)(ii).

(ii) The Administrator shall accept applications for purchase of secondary pool consumption allowances from—

(I) importers of products containing class II, group II substances;

(II) persons who purchased any class II, group II substance directly from a producer or importer of class

II, group II substances for use in a product containing a class II, group II substance, a manufacturing process, or a reclamation process;

(III) persons who did not produce or import a class II substance during calendar year 2004, 2005, or 2006, but who the Administrator determines have subsequently taken significant steps to produce or import a substantial quantity of any class II, group II substance; and

(IV) persons who produced or imported any class II substance during calendar year 2004, 2005, or 2006.

(iii) If the supply of consumption allowances in the secondary pool equals or exceeds the demand for consumption allowances in the secondary pool as presented in the applications for purchase, the Administrator shall sell the consumption allowances in the secondary pool to the applicants in the amounts requested in the applications for purchase. Any consumption allowances in the secondary pool not purchased in a calendar year may be rolled over and added to the quantity available in the secondary pool in the following year.

(iv) If the demand for consumption allowances in the secondary pool as presented in the applications for purchase exceeds the supply of consumption allowances in the secondary pool, the Administrator shall sell the consumption allowances as follows:

(I) The Administrator shall first sell the consumption allowances in the secondary pool to any importers of products containing class II, group II substances in the amounts requested in their applications for purchase. If the demand for such consumption allowances exceeds supply of such consumption allowances, the Administrator shall develop and utilize criteria for the sale of such consumption allowances among importers of products containing class II, group II substances that may include pro rata shares, historic importation, economic or technical hardship, or other factors deemed relevant by the Administrator.

(II) The Administrator shall next sell any remaining consumption allowances to persons identified in subclauses (II) and (III) of clause (ii) in the amounts requested in their applications for purchase. If the demand for such consumption allowances exceeds remaining supply of such consumption allowances, the Administrator shall develop and utilize criteria for the sale of such consumption allowances among subclauses (II) and (III) applicants that may include pro rata shares, historic use, economic or technical hardship, or other factors deemed relevant by the Administrator.

(III) The Administrator shall then sell any remaining consumption allowances to persons who produced or imported any class II substance during calendar year 2004, 2005, or 2006 in the amounts requested in their applications for purchase. If demand for such

consumption allowances exceeds remaining supply of such consumption allowances, the Administrator shall develop and utilize criteria for the sale of such consumption allowances that may include pro rata shares, historic production and importation, economic or technical hardship, or other factors deemed relevant by the Administrator.

(IV) Each person who purchases consumption allowances in a non-auction sale under this subparagraph shall be required to disclose the person or entity sponsoring or benefitting from the purchases if such person or entity is, in whole or in part, other than the purchaser or the purchaser's employer.

(E) DISCRETION TO WITHHOLD ALLOWANCES.—Nothing in this paragraph prevents the Administrator from exercising discretion to withhold and retire consumption allowances that would otherwise be available for auction or nonauction sale, or to allocate such allowances for essential uses pursuant to subsection (d). Not later than 18 months after the date of enactment of this section, the Administrator shall promulgate regulations establishing criteria for withholding and retiring consumption allowances and governing the allocation of withheld allowances for essential uses subject to the criteria under subsection (d).

(5) BANKING.—A consumption allowance or destruction offset credit may be used to meet the compliance obligation requirements of paragraph (1) in—

(A) the vintage year for the allowance or destruction offset credit; or

(B) any calendar year subsequent to the vintage year for the allowance or destruction offset credit.

(6) AUCTIONS.—

(A) INITIAL REGULATIONS.—Not later than 18 months after the date of enactment of this section, the Administrator shall promulgate regulations governing the auction of allowances under this section. Such regulations shall include the following requirements:

(i) FREQUENCY; FIRST AUCTION.—Auctions shall be held one time per year at regular intervals, with the first auction to be held no later than October 31, 2011.

(ii) AUCTION FORMAT.—Auctions shall follow a single-round, sealed-bid, uniform price format.

(iii) FINANCIAL ASSURANCE.—The Administrator may establish financial assurance requirements to ensure that auction participants can and will perform on their bids.

(iv) DISCLOSURE OF BENEFICIAL OWNERSHIP.—Each bidder in the auction shall be required to disclose the person or entity sponsoring or benefitting from the bidder's participation in the auction if such person or entity is, in whole or in part, other than the bidder.

(v) PUBLICATION OF INFORMATION.—After the auction, the Administrator shall, in a timely fashion, publish the number of bidders, number of winning bidders,

the quantity of allowances sold, and the auction clearing price.

(vi) BIDDING LIMITS IN 2012.—In the vintage year 2012 auction, no auction participant may, directly or in concert with another participant, bid for or purchase more allowances offered for sale at the auction than the greater of—

(I) the number of allowances which, when added to the number of allowances available for purchase by the participant in the producer-importer pool non-auction sale, would equal the participant's annual average consumption of class II, group II substances in calendar years 2004, 2005, and 2006; or

(II) the number of allowances equal to the product of—

(aa) 1.20 multiplied by the participant's allocation share of the producer-importer pool non-auction sale as determined under paragraph (4)(C)(ii); and

(bb) the number of vintage year 2012 allowances offered at auction.

(vii) BIDDING LIMITS IN 2013.—In the vintage year 2013 auction, no auction participant may, directly or in concert with another participant, bid for or purchase more allowances offered for sale at the auction than the product of—

(I) 1.15 multiplied by the ratio of the total number of vintage year 2012 allowances purchased by the participant from the auction and from the producer-importer pool non-auction sale to the total number of vintage year 2012 allowances in the producer-importer pool; and

(II) the number of vintage year 2013 allowances offered at auction.

(viii) BIDDING LIMITS IN SUBSEQUENT YEARS.—In the auctions for vintage year 2014 and subsequent vintage years, no auction participant may, directly or in concert with another participant, bid for or purchase more allowances offered for sale at the auction than the product of—

(I) 1.15 multiplied by the ratio of the highest number of allowances required to be held by the participant in any of the three prior vintage years to meet its compliance obligation under paragraph (1) to the total number of allowances in the producer-importer pool for such vintage year; and

(II) the number of allowances offered at auction for that vintage year.

(ix) OTHER REQUIREMENTS.—The Administrator may include in the regulations such other requirements or provisions as the Administrator considers necessary to promote effective, efficient, transparent, and fair administration of auctions under this section.

(B) REVISION OF REGULATIONS.—The Administrator may, at any time, revise the initial regulations promulgated under subparagraph (A) based on the Administrator's experience in administering allowance auctions by promulgating new regulations. Such revised regulations need not meet the requirements identified in subparagraph (A) if the Administrator determines that an alternative auction design would be more effective, taking into account factors including costs of administration, transparency, fairness, and risks of collusion or manipulation. In determining whether and how to revise the initial regulations under this paragraph, the Administrator shall not consider maximization of revenues to the Federal Government.

(C) DELEGATION OR CONTRACT.—Pursuant to regulations under this section, the Administrator may, by delegation or contract, provide for the conduct of auctions under the Administrator's supervision by other departments or agencies of the Federal Government or by nongovernmental agencies, groups, or organizations.

(7) PAYMENTS FOR ALLOWANCES.—

(A) INITIAL REGULATIONS.—Not later than 18 months after the date of enactment of this section, the Administrator shall promulgate regulations governing the payment for allowances purchased in auction and non-auction sales under this section. Such regulations shall include the requirement that, in the event that full payment for purchased allowances is not made on the date of purchase, equal payments shall be made one time per calendar quarter with all payments for allowances of a vintage year made by the end of that vintage year.

(B) REVISION OF REGULATIONS.—The Administrator may, at any time, revise the initial regulations promulgated under subparagraph (A) based on the Administrator's experience in administering collection of payments by promulgating new regulations. Such revised regulations need not meet the requirements identified in subparagraph (A) if the Administrator determines that an alternative payment structure or frequency would be more effective, taking into account factors including cost of administration, transparency, and fairness. In determining whether and how to revise the initial regulations under this paragraph, the Administrator shall not consider maximization of revenues to the Federal Government.

(C) PENALTIES FOR NON-PAYMENT.—Failure to pay for purchased allowances in accordance with the regulations promulgated pursuant to this paragraph shall be a violation of the requirements of subsection (b). Section 113(c)(3) shall apply in the case of any person who knowingly fails to pay for purchased allowances in accordance with the regulations promulgated pursuant to this paragraph.

(8) IMPORTED PRODUCTS.—If the United States becomes a party or otherwise adheres to a multilateral agreement, including any amendment to the Montreal Protocol on Substances

That Deplete the Ozone Layer, which restricts the production or consumption of class II, group II substances—

(A) as of the date on which such agreement or amendment enters into force, it shall no longer be unlawful for any person to import from a party to such agreement or amendment any product containing any class II, group II substance whose production or consumption is regulated by such agreement or amendment without holding one consumption allowance or one destruction offset credit for each carbon dioxide equivalent ton of the class II, group II substance;

(B) the Administrator shall promulgate regulations within 12 months of the date the United States becomes a party or otherwise adheres to such agreement or amendment, or the date on which such agreement or amendment enters into force, whichever is later, to establish a new baseline for purposes of paragraph (2), which new baseline shall be the original baseline less the carbon dioxide equivalent of the annual average quantity of any class II substances regulated by such agreement or amendment contained in products imported from parties to such agreement or amendment in calendar years 2004, 2005, and 2006;

(C) as of the date on which such agreement or amendment enters into force, no person importing any product containing any class II, group II substance may, directly or in concert with another person, purchase any consumption allowances for sale by the Administrator for the importation of products from a party to such agreement or amendment that contain any class II, group II substance restricted by such agreement or amendment; and

(D) the Administrator may adjust the two allowance pools established in paragraph (4) such that up to 90 percent of the consumption allowances available for a calendar year are placed in the producer-importer pool with the remaining consumption allowances placed in the secondary pool.

(9) OFFSETS.—

(A) CHLOROFLUOROCARBON DESTRUCTION.—Within 18 months after the date of enactment of this section, the Administrator shall promulgate regulations to provide for the issuance of offset credits for the destruction, in the calendar year 2012 or later, of chlorofluorocarbons in the United States. The Administrator shall establish and distribute to the destroying entity a quantity of destruction offset credits equal to 0.8 times the number of metric tons of carbon dioxide equivalents of reduction achieved through the destruction. No destruction offset credits shall be established for the destruction of a class II, group II substance.

(B) DEFINITION.—For purposes of this paragraph, the term 'destruction' means the conversion of a substance by thermal, chemical, or other means to another substance with little or no carbon dioxide equivalent value and no ozone depletion potential.

(C) REGULATIONS.—The regulations promulgated under this paragraph shall include standards and protocols for project eligibility, certification of destroyers, monitoring, tracking, destruction efficiency, quantification of project and baseline emissions and carbon dioxide equivalent value, and verification. The Administrator shall ensure that destruction offset credits represent real and verifiable destruction of chlorofluorocarbons or other class I or class II, group I, substances authorized under subparagraph (D).

(D) OTHER SUBSTANCES.—The Administrator may promulgate regulations to add to the list of class I and class II, group I, substances that may be destroyed for destruction offset credits, taking into account a candidate substance's carbon dioxide equivalent value, ozone depletion potential, prevalence in banks in the United States, and emission rates, as well as the need for additional cost containment under the class II, group II limits and the integrity of the class II, group II limits. The Administrator shall not add a class I or class II, group I substance to the list if the consumption of the substance has not been completely phased-out internationally (except for essential use exemptions or other similar exemptions) pursuant to the Montreal Protocol.

(E) EXTENSION OF OFFSETS.—(i) At any time after the Administrator promulgates regulations pursuant to subparagraph (A), the Administrator may, pursuant to the requirements of part D of title VII and based on the carbon dioxide equivalent value of the substance destroyed, add the types of destruction projects authorized to receive destruction offset credits under this paragraph to the list of types of projects eligible for offset credits under section 733. If such projects are added to the list under section 733, the issuance of offset credits for such projects under part D of title VII shall be governed by the requirements of such part D, while the issuance of offset credits for such projects under this paragraph shall be governed by the requirements of this paragraph. Nothing in this paragraph shall affect the issuance of offset credits under section 740.

(ii) The Administrator shall not make the addition under clause (i) unless the Administrator finds that insufficient destruction is occurring or is projected to occur under this paragraph and that the addition would increase destruction.

(iii) In no event shall more than one destruction offset credit be issued under title VII and this section for the destruction of the same quantity of a substance.

(10) LEGAL STATUS OF ALLOWANCES AND CREDITS.—None of the following constitutes a property right:

(A) A production or consumption allowance.

(B) A destruction offset credit.

(c) DEADLINES FOR COMPLIANCE.—Notwithstanding the deadlines specified for class II substances in sections 608, 609, 610, 612, and 613 that occur prior to January 1, 2009, the deadline for promul-

gating regulations under those sections for class II, group II substances shall be January 1, 2012.

(d) EXCEPTIONS FOR ESSENTIAL USES.—Notwithstanding the provisions of this section regarding auction and nonauction sale of allowances, to the extent consistent with any applicable multilateral agreement to which the United States is a party or otherwise adheres, the Administrator may allocate (and in the case of medical devices, shall determine whether to allocate) allowances withheld from auction or nonauction sale under subsection (b)(4)(E) for essential uses pursuant to the following requirements:

(1) MEDICAL DEVICES.—The Administrator, after notice and opportunity for public comment, and in consultation with the Commissioner of Food and Drugs, shall determine whether to allocate withheld allowances for the production and consumption of class II, group II substances solely for use in medical devices approved and determined to be essential by the Commissioner. Not later than 20 months after the date of enactment of this title, the Commissioner shall approve and determine essential medical devices. For purposes of this section, section 601(8)(A) shall not apply to metered dose inhalers.

(2) AVIATION AND SPACE VEHICLE SAFETY.—The Administrator, after notice and opportunity for public comment, and in consultation with the Administrator of the Federal Aviation Administration or the Administrator of the National Aeronautics and Space Administration, may allocate withheld allowances for the production and consumption of class II, group II substances solely for aviation and space flight safety purposes.

(3) FIRE SUPPRESSION.—The Administrator, after notice and opportunity for public comment, may allocate withheld allowances for the production and consumption of class II, group II substances solely for fire suppression purposes. Paragraphs (1) and (2) of subsection (g) of section 604 shall apply to class II, group II substances in the same manner and to the same extent as such provisions apply to the substances specified in such subsection.

(4) NATIONAL SECURITY.—The Administrator, after notice and opportunity for public comment, and in consultation with the Secretary of Defense, may allocate withheld allowances for the production and consumption of class II, group II substances for use as may be necessary to protect the national security interests of the United States if the Administrator, in consultation with the Secretary of Defense, finds that adequate substitutes are not available and that the production or consumption of such substance is necessary to protect such national security interest.

(e) DEVELOPING COUNTRIES.—Notwithstanding any phase down of production required by this section, the Administrator, after notice and opportunity for public comment, may authorize the production of limited quantities of class II, group II substances in excess of the amounts otherwise allowable under this section solely for export to, and use in, developing countries. Any production authorized under this subsection shall be solely for purposes of satisfying the basic domestic needs of such countries as provided in applicable

international agreements, if any, to which the United States is a party or otherwise adheres.

(f) NATIONAL SECURITY; FIRE SUPPRESSION, ETC.—The provisions of subsection (f) and paragraphs (1) and (2) of subsection (g) of section 604 shall apply to any consumption and production phase down of class II, group II substances in the same manner and to the same extent, consistent with any applicable international agreement to which the United States is a party or otherwise adheres, as such provisions apply to the substances specified in such subsection.

(g) ACCELERATED SCHEDULE.—In lieu of section 606, the provisions of paragraphs (1), (2), and (3) of this subsection shall apply in the case of class II, group II substances.

(1) IN GENERAL.—The Administrator shall promulgate initial regulations not later than 18 months after the date of enactment of this section, and revised regulations any time thereafter, which establish a schedule for phasing down the consumption (and, if the condition in subsection (b)(1)(B) is met, the production) of class II, group II substances that is more stringent than the schedule set forth in this section if, based on the availability of substitutes, the Administrator determines that such more stringent schedule is practicable, taking into account technological achievability, safety, and other factors the Administrator deems relevant, or if the Montreal Protocol, or any applicable international agreement to which the United States is a party or otherwise adheres, is modified or established to include a schedule or other requirements to control or reduce production, consumption, or use of any class II, group II substance more rapidly than the applicable schedule under this section.

(2) PETITION.—Any person may submit a petition to promulgate regulations under this subsection in the same manner and subject to the same procedures as are provided in section 606(b).

(3) INCONSISTENCY.—If the Administrator determines that the provisions of this section regarding banking, allowance rollover, or destruction offset credits create a significant potential for inconsistency with the requirements of any applicable international agreement to which the United States is a party or otherwise adheres, the Administrator may promulgate regulations restricting the availability of banking, allowance rollover, or destruction offset credits to the extent necessary to avoid such inconsistency.

(h) EXCHANGE.—Section 607 shall not apply in the case of class II, group II substances. Production and consumption allowances for class II, group II substances may be freely exchanged or sold but may not be converted into allowances for class II, group I substances.

(i) LABELING.—(1) In applying section 611 to products containing or manufactured with class II, group II substances, in lieu of the words 'destroying ozone in the upper atmosphere' on labels required under section 611 there shall be substituted the words 'contributing to global warming'.

(2) The Administrator may, through rulemaking, exempt from the requirements of section 611 products containing or manufactured with class II, group II substances determined to have little or no

carbon dioxide equivalent value compared to other substances used in similar products.

(j) NONESSENTIAL PRODUCTS.—For the purposes of section 610, class II, group II substances shall be regulated under section 610(b), except that in applying section 610(b) the word 'hydrofluorocarbon' shall be substituted for the word 'chlorofluorocarbon' and the term 'class II, group II' shall be substituted for the term 'class I'. Class II, group II substances shall not be subject to the provisions of section 610(d).

(k) INTERNATIONAL TRANSFERS.—In the case of class II, group II substances, in lieu of section 616, this subsection shall apply. To the extent consistent with any applicable international agreement to which the United States is a party or otherwise adheres, including any amendment to the Montreal Protocol, the United States may engage in transfers with other parties to such agreement or amendment under the following conditions:

(1) The United States may transfer production allowances to another party to such agreement or amendment if, at the time of the transfer, the Administrator establishes revised production limits for the United States accounting for the transfer in accordance with regulations promulgated pursuant to this subsection.

(2) The United States may acquire production allowances from another party to such agreement or amendment if, at the time of the transfer, the Administrator finds that the other party has revised its domestic production limits in the same manner as provided with respect to transfers by the United States in the regulations promulgated pursuant to this subsection.

(l) RELATIONSHIP TO OTHER LAWS.—

(1) STATE LAWS.—For purposes of section 116, the requirements of this section for class II, group II substances shall be treated as requirements for the control and abatement of air pollution.

(2) MULTILATERAL AGREEMENTS.—Section 614 shall apply to the provisions of this section concerning class II, group II substances, except that for the words 'Montreal Protocol' there shall be substituted the words 'Montreal Protocol, or any applicable multilateral agreement to which the United States is a party or otherwise adheres that restricts the production or consumption of class II, group II substances,' and for the words 'Article 4 of the Montreal Protocol' there shall be substituted 'any provision of such multilateral agreement regarding trade with non-parties'.

(3) FEDERAL FACILITIES.—For purposes of section 118, the requirements of this section for class II, group II substances and corresponding State, interstate, and local requirements, administrative authority, and process and sanctions shall be treated as requirements for the control and abatement of air pollution within the meaning of section 118.

(m) CARBON DIOXIDE EQUIVALENT VALUE.—(1) In lieu of section 602(e), the provisions of this subsection shall apply in the case of class II, group II substances. Simultaneously with establishing the list of class II, group II substances, and simultaneously with any

addition to that list, the Administrator shall publish the carbon dioxide equivalent value of each listed class II, group II substance, based on a determination of the number of metric tons of carbon dioxide that makes the same contribution to global warming over 100 years as 1 metric ton of each class II, group II substance.

(2) Not later than February 1, 2017, and not less than every 5 years thereafter, the Administrator shall—

(A) review, and if appropriate, revise the carbon dioxide equivalent values established for class II, group II substances based on a determination of the number of metric tons of carbon dioxide that makes the same contributions to global warming over 100 years as 1 metric ton of each class II, group II substance; and

(B) publish in the Federal Register the results of that review and any revisions.

(3) A revised determination published in the Federal Register under paragraph (2)(B) shall take effect for production of class II, group II substances, consumption of class II, group II substances, and importation of products containing class II, group II substances starting on January 1 of the first calendar year starting at least 9 months after the date on which the revised determination was published.

(4) The Administrator may decrease the frequency of review and revision under paragraph (2) if the Administrator determines that such decrease is appropriate in order to synchronize such review and revisions with any similar review process carried out pursuant to the United Nations Framework Convention on Climate Change, an agreement negotiated under that convention, The Vienna Convention for the Protection of the Ozone Layer, or an agreement negotiated under that convention, except that in no event shall the Administrator carry out such review and revision any less frequently than every 10 years.

(n) REPORTING REQUIREMENTS.—In lieu of subsections (b) and (c) of section 603, paragraphs (1) and (2) of this subsection shall apply in the case of class II, group II substances:

(1) IN GENERAL.—On a quarterly basis, or such other basis (not less than annually) as determined by the Administrator, each person who produced, imported, or exported a class II, group II substance, or who imported a product containing a class II, group II substance, shall file a report with the Administrator setting forth the carbon dioxide equivalent amount of the substance that such person produced, imported, or exported, as well as the amount that was contained in products imported by that person, during the preceding reporting period. Each such report shall be signed and attested by a responsible officer. If all other reporting is complete, no such report shall be required from a person after April 1 of the calendar year after such person permanently ceases production, importation, and exportation of the substance, as well as importation of products containing the substance, and so notifies the Administrator in writing. If the United States becomes a party or otherwise adheres to a multilateral agreement, including any amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer, that restricts the production or consumption of class II,

group II substances, then, if all other reporting is complete, no such report shall be required from a person with respect to importation from parties to such agreement or amendment of products containing any class II, group II substance restricted by such agreement or amendment, after April 1 of the calendar year following the year during which such agreement or amendment enters into force.

(2) BASELINE REPORTS FOR CLASS II, GROUP II SUBSTANCES.—

(A) IN GENERAL.—Unless such information has been previously reported to the Administrator, on the date on which the first report under paragraph (1) of this subsection is required to be filed, each person who produced, imported, or exported a class II, group II substance, or who imported a product containing a class II substance, (other than a substance added to the list of class II, group II substances after the publication of the initial list of such substances under this section), shall file a report with the Administrator setting forth the amount of such substance that such person produced, imported, exported, or that was contained in products imported by that person, during each of calendar years 2004, 2005, and 2006.

(B) PRODUCERS.—In reporting under subparagraph (A), each person who produced in the United States a class II substance during calendar year 2004, 2005, or 2006 shall—

(i) report all acquisitions or purchases of class II substances during each of calendar years 2004, 2005, and 2006 from all other persons who produced in the United States a class II substance during calendar year 2004, 2005, or 2006, and supply evidence of such acquisitions and purchases as deemed necessary by the Administrator; and

(ii) report all transfers or sales of class II substances during each of calendar years 2004, 2005, and 2006 to all other persons who produced in the United States a class II substance during calendar year 2004, 2005, or 2006, and supply evidence of such transfers and sales as deemed necessary by the Administrator.

(C) ADDED SUBSTANCES.—In the case of a substance added to the list of class II, group II substances after publication of the initial list of such substances under this section, each person who produced, imported, exported, or imported products containing such substance in calendar year 2004, 2005, or 2006 shall file a report with the Administrator within 180 days after the date on which such substance is added to the list, setting forth the amount of the substance that such person produced, imported, and exported, as well as the amount that was contained in products imported by that person, in calendar years 2004, 2005, and 2006.

(o) STRATOSPHERIC OZONE AND CLIMATE PROTECTION FUND.—

(1) IN GENERAL.—There is established in the Treasury of the United States a Stratospheric Ozone and Climate Protection Fund.

(2) DEPOSITS.—The Administrator shall deposit all proceeds from the auction and non-auction sale of allowances under this section into the Stratospheric Ozone and Climate Protection Fund.

(3) USE.—Amounts deposited into the Stratospheric Ozone and Climate Protection Fund shall be available, subject to appropriations, exclusively for the following purposes:

(A) RECOVERY, RECYCLING, AND RECLAMATION.—The Administrator may use funds to establish a program to incentivize the recovery, recycling, and reclamation of any Class II substances in order to reduce emissions of such substances.

(B) MULTILATERAL FUND.—If the United States becomes a party or otherwise adheres to a multilateral agreement, including any amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer, which restricts the production or consumption of class II, group II substances, the Administrator may use funds to meet any related contribution obligation of the United States to the Multilateral Fund for the Implementation of the Montreal Protocol or similar multilateral fund established under such multilateral agreement.

(C) BEST-IN-CLASS APPLIANCES DEPLOYMENT PROGRAM.—The Secretary of Energy may use funds to establish and carry out a program, to be known as the 'Best-in-Class Appliances Deployment Program'—

(i) to provide bonus payments to retailers or distributors for sales of best-in-class high-efficiency household appliance models, high-efficiency installed building equipment, and high-efficiency consumer electronics, with the goals of—

(I) accelerating the reduction in consumption of hydrochlorofluorocarbons (measured on a global warming potential-weighted basis);

(II) reducing life-cycle costs for consumers;

(III) encouraging innovation; and

(IV) maximizing energy savings and public benefit;

(ii) to provide bounties to retailers and manufacturers for the replacement, retirement, and recycling of old, inefficient, and environmentally harmful products; and

(iii) to provide premium awards to manufacturers for developing and producing new super-efficient best-in-class products.

(D) LOW GLOBAL WARMING PRODUCT TRANSITION ASSISTANCE PROGRAM.—

(i) IN GENERAL.—The Administrator, in consultation with the Secretary of Energy, may utilize funds in fiscal years 2012 through 2022 to establish a program to provide financial assistance to manufacturers of products containing class II, group II substances to facilitate the transition to products that contain or utilize

alternative substances with no or low carbon dioxide equivalent value and no ozone depletion potential.

(ii) DEFINITION OF PRODUCTS.—In this subparagraph, the term 'products' means refrigerators, freezers, dehumidifiers, air conditioners, foam insulation, technical aerosols, fire protection systems, and semiconductors.

(iii) FINANCIAL ASSISTANCE.—The Administrator may provide financial assistance to manufacturers pursuant to clause (i) for—

(I) the design and configuration of new products that use alternative substances with no or low carbon dioxide equivalent value and no ozone depletion potential; and

(II) the redesign and retooling of facilities for the manufacture of products in the United States that use alternative substances with no or low carbon dioxide equivalent value and no ozone depletion potential.

(iv) REPORTS.—For any fiscal year during which the Administrator provides financial assistance pursuant to this subparagraph, the Administrator shall submit a report to the Congress within 3 months of the end of such fiscal year detailing the amounts, recipients, specific purposes, and results of the financial assistance provided.

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TITLE VII—GLOBAL WARMING POLLUTION REDUCTION AND INVESTMENT PROGRAM

SEC. 700. DEFINITIONS.

In this title:

(1) ADDITIONAL.—The term 'additional', when used with respect to reductions or avoidance of greenhouse gas emissions, or to sequestration of greenhouse gases, means reductions, avoidance, or sequestration that result in a lower level of net greenhouse gas emissions or atmospheric concentrations than would occur in the absence of an offset credit.

(2) ADDITIONALITY.—The term 'additionality' means the extent to which reductions or avoidance of greenhouse gas emissions, or sequestration of greenhouse gases, are additional.

(3) ADVISORY BOARD.—The term 'Advisory Board' means the Offsets Integrity Advisory Board established under section 731.

(4) AFFILIATED.—The term 'affiliated'—

(A) when used in relation to an entity, means owned or controlled by, or under common ownership or control with, another entity, as determined by the Administrator; and

(B) when used in relation to a natural gas local distribution company, means owned or controlled by, or under common ownership or control with, another natural gas local distribution company, as determined by the Administrator.

(5) ALLOWANCE.—*The term 'allowance' means a limited authorization to emit, or have attributable greenhouse gas emissions in an amount of, 1 ton of carbon dioxide equivalent of a greenhouse gas in accordance with this title; it includes an emission allowance, a compensatory allowance, or an international emission allowance.*

(6) ATTRIBUTABLE GREENHOUSE GAS EMISSIONS.—*The term 'attributable greenhouse gas emissions' means—*

(A) for a covered entity that is a fuel producer or importer described in paragraph (13)(B), greenhouse gases that would be emitted from the combustion of any petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid, produced or imported by that covered entity for sale or distribution in interstate commerce, assuming no capture and sequestration of any greenhouse gas emissions;

(B) for a covered entity that is an industrial gas producer or importer described in paragraph (13)(C), the tons of carbon dioxide equivalent of fossil fuel-based carbon dioxide, nitrous oxide, any fluorinated gas, other than nitrogen trifluoride, that is a greenhouse gas, or any combination thereof—

(i) produced or imported by such covered entity during the previous calendar year for sale or distribution in interstate commerce; or

(ii) released as fugitive emissions in the production of fluorinated gas; and

(C) for a natural gas local distribution company described in paragraph (13)(J), greenhouse gases that would be emitted from the combustion of the natural gas, and any other gas meeting the specifications for commingling with natural gas for purposes of delivery, that such entity delivered during the previous calendar year to customers that are not covered entities, assuming no capture and sequestration of that greenhouse gas.

(7) BIOLOGICAL SEQUESTRATION; BIOLOGICALLY SEQUESTERED.—*The terms 'biological sequestration' and 'biologically sequestered' mean the removal of greenhouse gases from the atmosphere by terrestrial biological means, such as by growing plants, and the storage of those greenhouse gases in plants or soils.*

(8) CAPPED EMISSIONS.—*The term 'capped emissions' means greenhouse gas emissions to which section 722 applies, including emissions from the combustion of natural gas, petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid to which section 722(b)(2) or (8) applies.*

(9) CAPPED SOURCE.—*The term 'capped source' means a source that directly emits capped emissions.*

(10) CARBON DIOXIDE EQUIVALENT.—*The term 'carbon dioxide equivalent' means the unit of measure, expressed in metric tons, of greenhouse gases as provided under section 711 or 712.*

(11) CARBON STOCK.—*The term 'carbon stock' means the quantity of carbon contained in a biological reservoir or system which has the capacity to accumulate or release carbon.*

(12) COMPENSATORY ALLOWANCE.—*The term 'compensatory allowance' means an allowance issued under section 721(f).*

(13) COVERED ENTITY.—*The term 'covered entity' means each of the following:*

(A) Any electricity source.

(B)(i) Any stationary source that produces petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid, the combustion of which would emit 25,000 or more tons of carbon dioxide equivalent, as determined by the Administrator.

(ii) Any entity that (or any group of 2 or more affiliated entities that, in the aggregate) imports petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid, the combustion of which would emit 25,000 or more tons of carbon dioxide equivalent, as determined by the Administrator.

(C) Any stationary source that produces, and any entity that (or any group of two or more affiliated entities that, in the aggregate) imports, for sale or distribution in interstate commerce, in bulk, or in products designated by the Administrator, in 2008 or any subsequent year more than 25,000 tons of carbon dioxide equivalent of—

(i) fossil fuel-based carbon dioxide;

(ii) nitrous oxide;

(iii) perfluorocarbons;

(iv) sulfur hexafluoride;

(v) any other fluorinated gas, except for nitrogen trifluoride, that is a greenhouse gas, as designated by the Administrator under section 711(b) or (c); or

(vi) any combination of greenhouse gases described in clauses (i) through (v).

(D) Any stationary source that has emitted 25,000 or more tons of carbon dioxide equivalent of nitrogen trifluoride in 2008 or any subsequent year.

(E) Any geologic sequestration site.

(F) Any stationary source in the following industrial sectors:

(i) Adipic acid production.

(ii) Primary aluminum production.

(iii) Ammonia manufacturing.

(iv) Cement production, excluding grinding-only operations.

(v) Hydrochlorofluorocarbon production.

(vi) Lime manufacturing.

(vii) Nitric acid production.

(viii) Petroleum refining.

(ix) Phosphoric acid production.

(x) Silicon carbide production.

(xi) Soda ash production.

(xii) Titanium dioxide production.

(xiii) Coal-based liquid or gaseous fuel production.

(G) Any stationary source in the chemical or petrochemical sector that, in 2008 or any subsequent year—

(i) produces acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, or methanol; or

(ii) produces a chemical or petrochemical product if producing that product results in annual combustion plus process emissions of 25,000 or more tons of carbon dioxide equivalent.

(H) Any stationary source that—

(i) is in one of the following industrial sectors: ethanol production; ferroalloy production; fluorinated gas production; food processing; glass production; hydrogen production; beneficiation or other processing (including agglomeration) of metal ores; iron and steel production; lead production; pulp and paper manufacturing; and zinc production; and

(ii) has emitted 25,000 or more tons of carbon dioxide equivalent in 2008 or any subsequent year.

(I) Any fossil fuel-fired combustion device (such as a boiler) or grouping of such devices that—

(i) is all or part of an industrial source not specified in subparagraph (D), (F), (G), or (H); and

(ii) has emitted 25,000 or more tons of carbon dioxide equivalent in 2008 or any subsequent year.

(J) Any natural gas local distribution company that (or any group of 2 or more affiliated natural gas local distribution companies that, in the aggregate) in 2008 or any subsequent year, delivers 460,000,000 cubic feet or more of natural gas to customers that are not covered entities.

(14) CREDITING PERIOD.*—The term 'crediting period' means the period with respect to which an offset project is eligible to earn offset credits under part D, as determined under section 734(c).*

(15) DESIGNATED REPRESENTATIVE.*—The term 'designated representative' means, with respect to a covered entity, a reporting entity, an offset project developer, or any other entity receiving or holding allowances or offset credits under this title, an individual authorized, through a certificate of representation submitted to the Administrator by the owners and operators or similar entity official, to represent the owners and operators or similar entity official in all matters pertaining to this title (including the holding, transfer, or disposition of allowances or offset credits), and to make all submissions to the Administrator under this title.*

(16) DEVELOPING COUNTRY.*—The term 'developing country' means a country eligible to receive official development assistance according to the income guidelines of the Development Assistance Committee of the Organization for Economic Cooperation and Development.*

(17) DOMESTIC OFFSET CREDIT.*—*

(A) IN GENERAL.*—The term 'domestic offset credit' means an offset credit issued under part D, other than an international offset credit.*

(B) EXCLUSION.*—The term 'domestic offset credit' does not include a term offset credit.*

(18) ELECTRICITY SOURCE.—*The term 'electricity source' means a stationary source that includes one or more utility units.*

(19) EMISSION.—*The term 'emission' means the release of a greenhouse gas into the ambient air. Such term does not include gases that are captured and sequestered, except to the extent that they are later released into the atmosphere, in which case compliance must be demonstrated pursuant to section 722(b)(5).*

(20) EMISSION ALLOWANCE.—*The term 'emission allowance' means an allowance established under section 721(a) or 726(g)(2).*

(21) FAIR MARKET VALUE.—*The term 'fair market value' means the average daily closing price on registered exchanges or, if such a price is unavailable, the average price as determined by the Administrator, during a specified time period, of an emission allowance.*

(22) FEDERAL LAND.—*The term 'Federal land' means land that is owned by the United States, other than land held in trust for an Indian or Indian tribe.*

(23) FOSSIL FUEL.—*The term 'fossil fuel' means natural gas, petroleum, or coal, or any form of solid, liquid, or gaseous fuel derived from such material, including consumer products that are derived from such materials and are combusted.*

(24) FOSSIL FUEL-FIRED.—*The term 'fossil fuel-fired' means powered by combustion of fossil fuel, alone or in combination with any other fuel, regardless of the percentage of fossil fuel consumed.*

(25) FUGITIVE EMISSIONS.—*The term 'fugitive emissions' means emissions from leaks, valves, joints, or other small openings in pipes, ducts, or other equipment, or from vents.*

(26) GEOLOGIC SEQUESTRATION; GEOLOGICALLY SEQUESTERED.—*The terms 'geologic sequestration' and 'geologically sequestered' mean the sequestration of greenhouse gases in subsurface geologic formations for purposes of permanent storage.*

(27) GEOLOGIC SEQUESTRATION SITE.—*The term 'geologic sequestration site' means a site where carbon dioxide is geologically sequestered.*

(28) GREENHOUSE GAS.—*The term 'greenhouse gas' means any gas described in section 711(a) or designated under section 711(b), (c), or (e), except to the extent that it is regulated under title VI.*

(29) HIGH CONSERVATION PRIORITY LAND.—*The term 'high conservation priority land' means land that is not Federal land and is—*

(A) globally or State ranked as critically imperiled or imperiled under a State Natural Heritage Program; or

(B) old-growth or late-successional forest, as identified by the office of the State Forester or relevant State agency with regulatory jurisdiction over forestry activities.

(30) HOLD.—*The term 'hold' means, with respect to an allowance, offset credit, or term offset credit, to have in the appropriate account in the allowance tracking system, or submit to the Administrator for recording in such account.*

(31) INDUSTRIAL SOURCE.—*The term 'industrial source' means any stationary source that—*

(A) is not an electricity source; and

(B) is in—

(i) the manufacturing sector (as defined in North American Industrial Classification System codes 31, 32, and 33); or

(ii) the natural gas processing or natural gas pipeline transportation sector (as defined in North American Industrial Classification System codes 211112 or 486210).

(32) INTERNATIONAL EMISSION ALLOWANCE.—*The term 'international emission allowance' means a tradable authorization to emit 1 ton of carbon dioxide equivalent of greenhouse gas that is issued by a national or supranational foreign government pursuant to a qualifying international program designated by the Administrator pursuant to section 728(a).*

(33) INTERNATIONAL OFFSET CREDIT.—*The term 'international offset credit' means an offset credit issued by the Administrator under section 744.*

(34) LEAKAGE.—*The term 'leakage' means a significant increase in greenhouse gas emissions, or significant decrease in sequestration, which is caused by an offset project and occurs outside the boundaries of the offset project.*

(35) MARKET STABILITY RESERVE ALLOWANCE.—*The term 'market stability reserve allowance' means an emission allowance reserved for, transferred to, or deposited in the market stability reserve, or established, under section 726.*

(36) MINERAL SEQUESTRATION.—*The term 'mineral sequestration' means sequestration of carbon dioxide from the atmosphere by capturing carbon dioxide into a permanent mineral, such as the aqueous precipitation of carbonate minerals that results in the storage of carbon dioxide in a mineral form.*

(37) NATURAL GAS LIQUID.—*The term 'natural gas liquid' means ethane, butane, isobutane, natural gasoline, and propane which is ready for commercial sale or use.*

(38) NATURAL GAS LOCAL DISTRIBUTION COMPANY.—*The term 'natural gas local distribution company' has the meaning given the term 'local distribution company' in section 2(17) of the Natural Gas Policy Act of 1978 (15 U.S.C. 3301(17)).*

(39) OFFSET CREDIT.—

(A) IN GENERAL.—*The term 'offset credit' means an offset credit issued under part D.*

(B) EXCLUSION.—*The term 'offset credit' does not include a term offset credit.*

(40) OFFSET PROJECT.—*The term 'offset project' means a project or activity that reduces or avoids greenhouse gas emissions, or sequesters greenhouse gases, and for which offset credits are or may be issued under part D.*

(41) OFFSET PROJECT DEVELOPER.—*The term 'offset project developer' means the individual or entity designated as the offset project developer in an offset project approval petition under section 735(c)(1).*

(42) QUALIFIED R&D FACILITY.—*The term 'qualified R&D facility' means a facility that conducts research and development, that was in operation as of the date of enactment of this title, and that is part of a covered entity subject to paragraphs (1) through (8) of section 722(b).*

(43) PETROLEUM.—*The term 'petroleum' includes crude oil, tar sands, oil shale, and heavy oils.*

(44) REPEATED INTENTIONAL REVERSALS.—*The term 'repeated intentional reversals' means at least 3 intentional reversals, as determined by the Administrator or a court under section 734(b)(3)(B)(ii).*

(45) RESEARCH AND DEVELOPMENT.—*The term 'research and development' means activities—*

(A) that are conducted in process units or at laboratory bench-scale settings;

(B) whose purpose is to conduct research and development for new processes, technologies, or products that contribute to lower greenhouse gas emissions; and

(C) that do not manufacture products for sale.

(46) RENEWABLE BIOMASS.—*The term 'renewable biomass' means any of the following:*

(A) Plant material, including waste material, harvested or collected from actively managed agricultural land that was in cultivation, cleared, or fallow and nonforested on January 1, 2009.

(B) Plant material, including waste material, harvested or collected from pastureland that was nonforested on January 1, 2009.

(C) Nonhazardous vegetative matter derived from waste, including separated yard waste, landscape right-of-way trimmings, construction and demolition debris, or food waste (but not municipal solid waste, recyclable waste paper, painted, treated or pressurized wood, or wood contaminated with plastic or metals).

(D) Animal waste or animal byproducts, including products of animal waste digesters.

(E) Algae.

(F) Trees, brush, slash, residues, or any other vegetative matter removed from within 600 feet of any building, campground, or route designated for evacuation by a public official with responsibility for emergency preparedness, or from within 300 feet of a paved road, electric transmission line, utility tower, or water supply line.

(G) Residues from or byproducts of milled logs.

(H) Any of the following removed from forested land that is not Federal and is not high conservation priority land:

(i) Trees, brush, slash, residues, interplanted energy crops, or any other vegetative matter removed from an actively managed tree plantation established—

(I) prior to January 1, 2009; or

(II) on land that, as of January 1, 2009, was cultivated or fallow and non-forested.

(ii) Trees, logging residue, thinnings, cull trees, pulpwood, and brush removed from naturally regenerated

forests or other non-plantation forests, including for the purposes of hazardous fuel reduction or preventative treatment for reducing or containing insect or disease infestation.

(iii) Logging residue, thinnings, cull trees, pulpwood, brush, and species that are non-native and noxious, from stands that were planted and managed after January 1, 2009, to restore or maintain native forest types.

(iv) Dead or severely damaged trees removed within 5 years of fire, blowdown, or other natural disaster, and badly infested trees.

(I) Materials, pre-commercial thinnings, or removed invasive species from National Forest System land and public lands (as defined in section 103 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1702)), including those that are byproducts of preventive treatments (such as trees, wood, brush, thinnings, chips, and slash), that are removed as part of a federally recognized timber sale, or that are removed to reduce hazardous fuels, to reduce or contain disease or insect infestation, or to restore ecosystem health, and that are—

(i) not from components of the National Wilderness Preservation System, Wilderness Study Areas, Inventoried Roadless Areas, old growth or mature forest stands, components of the National Landscape Conservation System, National Monuments, National Conservation Areas, Designated Primitive Areas; or Wild and Scenic Rivers corridors;

(ii) harvested in environmentally sustainable quantities, as determined by the appropriate Federal land manager; and

(iii) are harvested in accordance with Federal and State law, and applicable land management plans.

(47) RETIRE.—*The term 'retire', with respect to an allowance, offset credit, or term offset credit established or issued under this title, means to disqualify such allowance or offset credit for any subsequent use under this title, regardless of whether the use is a sale, exchange, or submission of the allowance, offset credit, or term offset credit to satisfy a compliance obligation.*

(48) REVERSAL.—*The term 'reversal' means an intentional or unintentional loss of sequestered greenhouse gases to the atmosphere.*

(49) SEQUESTERED AND SEQUESTRATION.—*The terms 'sequestered' and 'sequestration' mean the separation, isolation, or removal of greenhouse gases from the atmosphere, as determined by the Administrator. The terms include biological, geologic, and mineral sequestration, but do not include ocean fertilization techniques.*

(50) SMALL BUSINESS REFINER.—

(A) IN GENERAL.—*The term 'small business refiner' means a refiner that meets the applicable Federal refinery capacity and employee limitations criteria described in section 45H(c)(1) of the Internal Revenue Code of 1986 (as in*

effect on the date of enactment of this section and without regard to section 45H(d)).

(B) ELIGIBILITY.—*Eligibility of a small business refiner under this paragraph shall not be recalculated or disallowed on account of—*

(i) a merger of the small business refiner with 1 or more other small business refiners after December 31, 2002; or

(ii) the acquisition by a small business refiner of another small business refiner (or refinery of such refiner) after December 31, 2002.

(51) STATIONARY SOURCE.—*The term 'stationary source' means any integrated operation comprising any plant, building, structure, or stationary equipment, including support buildings and equipment, that is located within one or more contiguous or adjacent properties, is under common control of the same person or persons, and emits or may emit a greenhouse gas.*

(52) TON.—*The term 'ton' means a metric ton.*

(53) UNCAPPED EMISSIONS.—*The term 'uncapped emissions' means emissions of greenhouse gases emitted after December 31, 2011, that are not capped emissions.*

(54) UNITED STATES GREENHOUSE GAS EMISSIONS.—*The term 'United States greenhouse gas emissions' means the total quantity of annual greenhouse gas emissions from the United States, as calculated by the Administrator and reported to the United Nations Framework Convention on Climate Change Secretariat.*

(55) UTILITY UNIT.—*The term 'utility unit' means a combustion device that, on January 1, 2009, or any date thereafter, is fossil fuel-fired and serves a generator that produces electricity for sale, unless such combustion device, during the 12-month period starting the later of January 1, 2009, or the commencement of commercial operation and each calendar year starting after such later date—*

(A) is part of an integrated cycle system that cogenerates thermal energy and electricity during normal operation and that supplies 1/3 or less of its potential electric output capacity and 25 megawatts or less of electrical output for sale; or

(B) combusts materials of which more than 95 percent is municipal solid waste on a heat input basis.

(56) VINTAGE YEAR.—*The term 'vintage year' means the calendar year for which an emission allowance is established under section 721(a) or which is assigned to an emission allowance under section 726(g)(3)(A), except that the vintage year for a market stability reserve allowance shall be the year in which such allowance is purchased at auction.*

PART A—GLOBAL WARMING POLLUTION REDUCTION GOALS AND TARGETS

SEC. 701. FINDINGS.

Congress finds that—

(1) global warming poses a significant threat to the national security, economy, public health and welfare, and environment of the United States, as well as of other countries;

(2) reviews of scientific studies, including by the Intergovernmental Panel on Climate Change and the National Academy of Sciences, demonstrate that global warming is the result of the combined anthropogenic greenhouse gas emissions from numerous sources of all types and sizes;

(3) each increment of emission, when combined with other emissions, causes or contributes materially to the acceleration and extent of global warming and its adverse effects for the lifetime of such gas in the atmosphere;

(4) accordingly, controlling emissions in small as well as large quantities is essential to prevent, slow the pace of, reduce the threats from, and mitigate global warming and its adverse effects;

(5) because they induce global warming, greenhouse gas emissions cause or contribute to injuries to persons in the United States, including—

(A) adverse health effects, such as disease and loss of life;

(B) displacement of human populations;

(C) damage to property and other interests relating to ocean levels, acidification, and ice changes;

(D) severe weather and seasonal changes;

(E) disruption, costs, and losses to business, trade, employment, farms, subsistence, aesthetic enjoyment of the environment, recreation, culture, and tourism;

(F) damage to plants, forests, lands, and waters;

(G) harm to wildlife and habitat;

(H) scarcity of water and the decreased abundance of other natural resources;

(I) worsening of tropospheric air pollution;

(J) substantial threats of similar damage; and

(K) other harm;

(6) the fact that many of those effects and risks of future effects of global warming are widely shared does not minimize the adverse effects individual persons have suffered, will suffer, and are at risk of suffering because of global warming;

(7) the fact that some of the adverse and potentially catastrophic effects of global warming are at risk of occurring and not a certainty does not negate the harm persons suffer from actions that increase the likelihood, extent, and severity of such future impacts;

(8) countries of the world look to the United States for leadership in addressing the threat of and harm from global warming;

(9) full implementation of this title is critical to engage other countries in an international effort to mitigate the threat of and harm from global warming; and

(10) global warming and its adverse effects are occurring and are likely to continue and increase in magnitude, and to do so at a greater and more harmful rate, unless the this title is fully implemented and enforced in an expeditious manner.

SEC. 702. ECONOMYWIDE REDUCTION GOALS.

The goals of this title, and the Clean Energy Jobs and American Power Act (and the amendments made by that Act), are to reduce steadily the quantity of United States greenhouse gas emissions such that—

(1) in 2012, the quantity of United States greenhouse gas emissions does not exceed 97 percent of the quantity of United States greenhouse gas emissions in 2005;

(2) in 2020, the quantity of United States greenhouse gas emissions does not exceed 80 percent of the quantity of United States greenhouse gas emissions in 2005;

(3) in 2030, the quantity of United States greenhouse gas emissions does not exceed 58 percent of the quantity of United States greenhouse gas emissions in 2005; and

(4) in 2050, the quantity of United States greenhouse gas emissions does not exceed 17 percent of the quantity of United States greenhouse gas emissions in 2005.

SEC. 703. REDUCTION TARGETS FOR SPECIFIED SOURCES.

(a) IN GENERAL.*—The regulations issued under section 721 shall limit and reduce annually the greenhouse gas emissions of capped sources each calendar year beginning in 2012 such that—*

(1) in 2012, the quantity of greenhouse gas emissions from capped sources does not exceed 97 percent of the quantity of greenhouse gas emissions from such sources in 2005;

(2) in 2020, the quantity of greenhouse gas emissions from capped sources does not exceed 80 percent of the quantity of greenhouse gas emissions from such sources in 2005;

(3) in 2030, the quantity of greenhouse gas emissions from capped sources does not exceed 58 percent of the quantity of greenhouse gas emissions from such sources in 2005; and

(4) in 2050, the quantity of greenhouse gas emissions from capped sources does not exceed 17 percent of the quantity of greenhouse gas emissions from such sources in 2005.

(b) DEFINITION OF GREENHOUSE GAS EMISSIONS FROM SUCH SOURCES IN 2005.*—For purposes of this section, the term 'greenhouse gas emissions from such sources in 2005' means emissions to which section 722 would have applied if the requirements of this title for the specified year had been in effect for 2005.*

SEC. 704. SUPPLEMENTAL POLLUTION REDUCTIONS.

For the purposes of decreasing the likelihood of catastrophic climate change, preserving tropical forests, building capacity to generate offset credits, and facilitating international action on global warming, the Administrator shall set aside a percentage specified in section 771(c) of the quantity of emission allowances established under section 721(a) for each year, to be used to achieve a reduction of greenhouse gas emissions from deforestation in developing countries in accordance with part E. In 2020, activities supported under part E shall provide greenhouse gas reductions in an amount equal to an additional 10 percentage points of reductions from United States greenhouse gas emissions in 2005. The Administrator shall distribute these allowances with respect to activities in countries that enter into and implement agreements or arrangements relating to reduced deforestation as described in section 753(a)(2).

SEC. 705. REVIEW AND PROGRAM RECOMMENDATIONS.

(a) IN GENERAL.—*The Administrator shall, in consultation with appropriate Federal agencies, submit to Congress a report not later than July 1, 2013, and every 4 years thereafter, that includes—*

(1) an analysis of key findings based on up-to-date scientific information and data relevant to global climate change;

(2) an analysis of capabilities to monitor and verify greenhouse gas reductions on a worldwide basis, including for the United States, as required under the Clean Energy Jobs and American Power Act (and the amendments made by that Act);

(3) an analysis of the status of worldwide greenhouse gas reduction efforts, including implementation of the Clean Energy Jobs and American Power Act and other policies, both domestic and international, for reducing greenhouse gas emissions, preventing dangerous atmospheric concentrations of greenhouse gases, preventing significant irreversible consequences of climate change, and reducing vulnerability to the impacts of climate change; and

(4) an analysis, to be conducted by the Secretary of Energy in accordance with subsection (f) and submitted to the Administrator for inclusion in each report under this subsection, of the technological feasibility of achieving additional reductions in greenhouse gas emissions.

(b) EXCEPTION.—*Subsection (a)(3) shall not apply to the first report submitted under subsection (a).*

(c) LATEST SCIENTIFIC INFORMATION.—*The analysis required under subsection (a)(1) shall—*

(1) address existing scientific information and reports, considering, to the greatest extent possible, the most recent assessment report of the Intergovernmental Panel on Climate Change, reports by the United States Global Change Research Program, the Natural Resources Climate Change Adaptation Panel established under section 365 of the Clean Energy Jobs and American Power Act, and Federal agencies, and the European Union's global temperature data assessment;

(2) review trends and projections for—

(A) global and country-specific annual emissions of greenhouse gases, and cumulative greenhouse gas emissions produced between 1850 and the present, including—

(i) global cumulative emissions of anthropogenic greenhouse gases;

(ii) global annual emissions of anthropogenic greenhouse gases; and

(iii) by country, annual total, annual per capita, and cumulative anthropogenic emissions of greenhouse gases for the top 50 emitting nations;

(B) significant changes, both globally and by region, in annual net non-anthropogenic greenhouse gas emissions from natural sources, including permafrost, forests, or oceans;

(C) global atmospheric concentrations of greenhouse gases, expressed in annual concentration units as well as carbon dioxide equivalents based on 100-year global warming potentials;

(D) major climate forcing factors, such as aerosols;

(E) global average temperature, expressed as seasonal and annual averages in land, ocean, and land-plus-ocean averages; and

(F) sea level rise;

(3) assess the current and potential impacts of global climate change on—

(A) human populations, including impacts on public health, economic livelihoods, subsistence, tribal culture, human infrastructure, and displacement or permanent relocation due to flooding, severe weather, extended drought, erosion, or other ecosystem changes;

(B) freshwater systems, including water resources for human consumption and agriculture and natural and managed ecosystems, flood and drought risks, and relative humidity;

(C) the carbon cycle, including impacts related to the thawing of permafrost, the frequency and intensity of wildfire, and terrestrial and ocean carbon sinks;

(D) ecosystems and animal and plant populations, including impacts on species abundance, phenology, and distribution;

(E) oceans and ocean ecosystems, including effects on sea level, ocean acidity, ocean temperatures, coral reefs, ocean circulation, fisheries, and other indicators of ocean ecosystem health;

(F) the cryosphere, including effects on ice sheet mass balance, mountain glacier mass balance, and sea-ice extent and volume;

(G) changes in the intensity, frequency, or distribution of severe weather events, including precipitation, tropical cyclones, tornadoes, and severe heat waves;

(H) agriculture and forest systems; and

(I) any other indicators the Administrator deems appropriate;

(4) summarize any significant socioeconomic impacts of climate change in the United States, including the territories of the United States, drawing on work by Federal agencies and the academic literature, including impacts on—

(A) public health;

(B) economic livelihoods, subsistence, and tribal culture;

(C) displacement or permanent relocation due to flooding, severe weather, extended drought, or other ecosystem changes;

(D) human infrastructure, including coastal infrastructure vulnerability to extreme events and sea level rise, river floodplain infrastructure, and sewer and water management systems;

(E) agriculture and forests, including effects on potential growing season, distribution, and yield;

(F) water resources for human consumption, agriculture and natural and managed ecosystems, flood and drought risks, and relative humidity;

(G) energy supply and use; and

(H) transportation;

(5) in assessing risks and impacts, use a risk management framework, including both qualitative and quantitative measures, to assess the observed and projected impacts of current and future climate change, accounting for—

(A) both monetized and non-monetized losses;

(B) potential nonlinear, abrupt, or essentially irreversible changes in the climate system;

(C) potential nonlinear increases in the cost of impacts;

(D) potential low-probability, high impact events; and

(E) whether impacts are transitory or essentially permanent; and

(6) based on the findings of the Administrator under this section, as well as assessments produced by the Intergovernmental Panel on Climate Change, the United States Global Change Research program, and other relevant scientific entities—

(A) describe increased risks to natural systems and society that would result from an increase in global average temperature 3.6 degrees Fahrenheit (2 degrees Celsius) above the pre-industrial average or an increase in atmospheric greenhouse gas concentrations above 450 parts per million carbon dioxide equivalent; and

(B) identify and assess—

(i) significant residual risks not avoided by the thresholds described in subparagraph (A);

(ii) alternative thresholds or targets that may more effectively limit the risks identified pursuant to clause (i); and

(iii) thresholds above those described in subparagraph (A) which significantly increase the risk of certain impacts or render them essentially permanent.

(d) STATUS OF MONITORING AND VERIFICATION CAPABILITIES TO EVALUATE GREENHOUSE GAS REDUCTION EFFORTS.—*The analysis required under subsection (a)(2) shall evaluate the capabilities of the monitoring, reporting, and verification systems used to quantify progress in achieving reductions in greenhouse gas emissions both globally and in the United States (as described in section 702), including—*

(1) quantification of emissions and emission reductions by entities participating in the pollution reduction and investment program under this title;

(2) quantification of emissions and emission reductions by entities participating in the offset program under this title;

(3) quantification of emission and emission reductions by entities regulated by performance standards;

(4) quantification of aggregate net emissions and emission reductions by the United States; and

(5) quantification of global changes in net emissions and in sources and sinks of greenhouse gases.

(e) STATUS OF GREENHOUSE GAS REDUCTION EFFORTS.—*The analysis required under subsection (a)(3) shall address—*

(1) whether the programs under the Clean Energy Jobs and American Power Act (and the amendments made by that Act) and other Federal statutes are resulting in sufficient United

States greenhouse gas emission reductions to meet the emissions reduction goals described in section 702, taking into account the use of offsets; and

(2) whether United States actions, taking into account international actions, commitments, and trends, and considering the range of plausible emissions scenarios, are sufficient to avoid—

(A) atmospheric greenhouse gas concentrations above 450 parts per million carbon dioxide equivalent;

(B) global average surface temperature 3.6 degrees Fahrenheit (2 degrees Celsius) above the pre-industrial average, or such other temperature thresholds as the Administrator deems appropriate; and

(C) other temperature or greenhouse gas thresholds identified pursuant to subsection (c)(6)(B).

(f) TECHNOLOGICAL INFORMATION.—*The analysis required under subsection (a)(4) shall—*

(1) review existing technological information and reports, including the most recent reports by the Department of Energy, the United States Global Change Research Program, the Intergovernmental Panel on Climate Change, and the International Energy Agency, and any other relevant information on technologies or practices that reduce or limit greenhouse gas emissions;

(2) include the participation of technical experts from relevant private industry sectors;

(3) review the current and future projected deployment of technologies and practices in the United States that reduce or limit greenhouse gas emissions, including—

(A) technologies for capture and sequestration of greenhouse gases;

(B) technologies to improve energy efficiency;

(C) low- or zero-greenhouse gas emitting energy technologies;

(D) low- or zero-greenhouse gas emitting fuels;

(E) biological sequestration practices and technologies; and

(F) any other technologies the Secretary determines to be relevant; and

(4) review and compare the emission reduction potential, commercial viability, market penetration, investment trends, and deployment of the technologies described in paragraph (3), including—

(A) the need for additional research and development, including publicly funded research and development;

(B) the extent of commercial deployment, including, where appropriate, a comparison to the cost and level of deployment of conventional fossil fuel-fired energy technologies and devices; and

(C) an evaluation of any substantial technological, legal, or market-based barriers to commercial deployment.

(g) RECOMMENDATIONS.—

(1) LATEST SCIENTIFIC INFORMATION.—*Based on the analysis described in subsection (a)(1), each report under subsection (a) shall identify actions that could be taken to—*

(A) improve the characterization of changes in the earth-climate system and impacts of global climate change;

(B) better inform decision making and actions related to global climate change;

(C) mitigate risks to natural and social systems; and

(D) design policies to better account for climate risks.

(2) MONITORING, REPORTING AND VERIFICATION.*—Based on the analysis described in subsection (a)(2), each report under subsection (a) shall identify key gaps in measurement, reporting, and verification capabilities and make recommendations to improve the accuracy and reliability of those capabilities.*

(3) STATUS OF GREENHOUSE GAS REDUCTION EFFORTS.*—Based on the analysis described in subsection (a)(3), taking into account international actions, commitments, and trends, and considering the range of plausible emissions scenarios, each report under subsection (a) shall identify—*

(A) the quantity of additional reductions required to meet the emissions reduction goals in section 702;

(B) the quantity of additional reductions in global greenhouse gas emissions needed to avoid the concentration and temperature thresholds identified in subsection (e); and

(C) possible strategies and approaches for achieving additional reductions.

(h) AUTHORIZATION OF APPROPRIATIONS.*—There are authorized to be appropriated to carry out this section such sums as may be necessary.*

SEC. 706. NATIONAL ACADEMY REVIEW.

(a) IN GENERAL.*—Not later than 1 year after the date of enactment of this title, the Administrator shall offer to enter into a contract with the National Academy of Sciences (in this section referred to as the 'Academy') under which the Academy shall, not later than July 1, 2014, and every 4 years thereafter, submit to Congress and the Administrator a report that includes—*

(1) a review of the most recent report and recommendations issued under section 705; and

(2) an analysis of technologies to achieve reductions in greenhouse gas emissions.

(b) FAILURE TO ISSUE A REPORT.*—In the event that the Administrator has not issued all or part of the most recent report required under section 705, the Academy shall conduct its own review and analysis of the required information.*

(c) RECOMMENDATIONS.*—*

(1) LATEST SCIENTIFIC INFORMATION.*—Based on the review described in subsection (a)(1), the Academy shall identify actions that could be taken to—*

(A) improve the characterization of changes in the earth-climate system and impacts of global climate change;

(B) better inform decision making and actions related to global climate change;

(C) mitigate risks to natural and social systems;

(D) design policies to better account for climate risks; and

(E) improve the accuracy and reliability of capabilities to monitor, report, and verify greenhouse gas emissions reduction efforts.

(2) TECHNOLOGICAL INFORMATION.—Based on the analysis described in subsection (a)(2), the Academy shall identify—

(A) additional emission reductions that may be possible as a result of technologies described in the analysis;

(B) barriers to the deployment of such technologies; and

(C) actions that could be taken to speed deployment of such technologies.

(3) STATUS OF GREENHOUSE GAS REDUCTION EFFORTS.—Based on the review described in subsection (a)(1), the Academy shall identify—

(A) the quantity of additional reductions required to meet the emissions reduction goals described in section 702; and

(B) the quantity of additional reductions in global greenhouse gas emissions needed to avoid the concentration and temperature thresholds described in section 705(c)(6)(A) or identified pursuant to section 705(c)(6)(B).

(d) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section such sums as may be necessary.

SEC. 707. PRESIDENTIAL RESPONSE AND RECOMMENDATIONS.

Not later than July 1, 2015, and every 4 years thereafter—

(1) the President shall direct relevant Federal agencies to use existing statutory authority to take appropriate actions identified in the reports submitted under sections 705 and 706 and to address any shortfalls identified in such reports; and

(2) in the event that the National Academy of Sciences has concluded, in the most recent report submitted under section 706, that the United States will not achieve the necessary domestic greenhouse gas emission reductions, or that global actions will not maintain safe global average surface temperature and atmospheric greenhouse gas concentration thresholds, the President shall submit to Congress a plan identifying domestic and international actions that will achieve necessary additional greenhouse gas reductions, including any recommendations for legislative action.

SEC. 708. CONSULTATION WITH STATES.

In the development of any regulations required to implement the global warming pollution and reduction investment program pursuant to this title, and in the implementation of that program, the Administrator shall consult with the States in the Regional Greenhouse Gas Initiative, the Western Climate Initiative, and the Mid-West Governors Accord.

PART B—DESIGNATION AND REGISTRATION OF GREENHOUSE GASES

SEC. 711. DESIGNATION OF GREENHOUSE GASES.

(a) GREENHOUSE GASES.—For purposes of this title, the following are greenhouse gases:

(1) Carbon dioxide.

(2) Methane.

(3) Nitrous oxide.

(4) Sulfur hexafluoride.

(5) Hydrofluorocarbons from a chemical manufacturing process at an industrial stationary source.

(6) Any perfluorocarbon that is an anthropogenic gas 1 metric ton of which makes the same or greater contribution to global warming over 100 years as 1 metric ton of carbon dioxide.

(7) Nitrogen trifluoride.

(8) Any other anthropogenic gas designated as a greenhouse gas by the Administrator under this section.

(b) DETERMINATION ON ADMINISTRATOR'S INITIATIVE.—*The Administrator shall, by rule—*

(1) determine whether 1 metric ton of another anthropogenic gas makes the same or greater contribution to global warming over 100 years as 1 metric ton of carbon dioxide;

(2) determine the carbon dioxide equivalent value for each gas with respect to which the Administrator makes an affirmative determination under paragraph (1);

(3) for each gas with respect to which the Administrator makes an affirmative determination under paragraph (1) and that is used as a substitute for a class I or class II substance under title VI, determine the extent to which to regulate that gas under section 619 and specify appropriate compliance obligations under section 619;

(4) designate as a greenhouse gas for purposes of this title each gas for which the Administrator makes an affirmative determination under paragraph (1), to the extent that it is not regulated under section 619; and

(5) specify the appropriate compliance obligations under this title for each gas designated as a greenhouse gas under paragraph (4).

(c) PETITIONS TO DESIGNATE A GREENHOUSE GAS.—

(1) IN GENERAL.—*Any person may petition the Administrator to designate as a greenhouse gas any anthropogenic gas 1 metric ton of which makes the same or greater contribution to global warming over 100 years as 1 metric ton of carbon dioxide.*

(2) CONTENTS OF PETITION.—*The petitioner shall provide sufficient data, as specified by rule by the Administrator, to demonstrate that the gas is likely to be a greenhouse gas and is likely to be produced, imported, used, or emitted in the United States. To the extent practicable, the petitioner shall also identify producers, importers, distributors, users, and emitters of the gas in the United States.*

(3) REVIEW AND ACTION BY THE ADMINISTRATOR.—*Not later than 90 days after receipt of a petition under paragraph (2), the Administrator shall determine whether the petition is complete and notify the petitioner and the public of the decision.*

(4) ADDITIONAL INFORMATION.—*The Administrator may require producers, importers, distributors, users, or emitters of the gas to provide information on the contribution of the gas to global warming over 100 years compared to carbon dioxide.*

(5) TREATMENT OF PETITION.—*For any substance used as a substitute for a class I or class II substance under title VI, the Administrator may elect to treat a petition under this subsection as a petition to list the substance as a class II, group II substance under section 619, and may require the petition to*

be amended to address listing criteria promulgated under that section.

(6) DETERMINATION.—*Not later than 2 years after receipt of a complete petition, the Administrator shall, after notice and an opportunity for comment—*

(A) issue and publish in the Federal Register—

(i) a determination that 1 metric ton of the gas does not make a contribution to global warming over 100 years that is equal to or greater than that made by 1 metric ton of carbon dioxide; and

(ii) an explanation of the decision; or

(B) determine that 1 metric ton of the gas makes a contribution to global warming over 100 years that is equal to or greater than that made by 1 metric ton of carbon dioxide, and take the actions described in subsection (b) with respect to such gas.

(7) GROUNDS FOR DENIAL.—*The Administrator may not deny a petition under this subsection solely on the basis of inadequate Environmental Protection Agency resources or time for review.*

(d) SCIENCE ADVISORY BOARD CONSULTATION.—

(1) CONSULTATION.—*The Administrator shall—*

(A) give notice to the Science Advisory Board prior to making a determination under subsection (b)(1), (c)(6), or (e)(2)(B);

(B) consider the written recommendations of the Science Advisory Board under paragraph (2) regarding the determination; and

(C) consult with the Science Advisory Board regarding such determination, including consultation subsequent to receipt of such written recommendations.

(2) FORMULATION OF RECOMMENDATIONS.—*Upon receipt of notice under paragraph (1)(A) regarding a pending determination under subsection (b)(1), (c)(6), or (e)(2)(B), the Science Advisory Board shall—*

(A) formulate recommendations regarding such determination, subject to a peer review process; and

(B) submit such recommendations in writing to the Administrator.

(e) MANUFACTURING AND EMISSION NOTICES.—

(1) NOTICE REQUIREMENT.—

(A) IN GENERAL.—*Effective 24 months after the date of enactment of this title, no person may manufacture or introduce into interstate commerce a fluorinated gas, or emit in a calendar year a significant quantity, as determined by the Administrator (which in no case shall be less than ½ ton of such fluorinated gas), of any fluorinated gas that is generated as a byproduct during the production or use of another fluorinated gas, unless—*

(i) the gas is designated as a greenhouse gas under this section or is an ozone-depleting substance listed as a class I or class II substance under title VI;

(ii) the Administrator has determined that 1 metric ton of such gas does not make a contribution to global

warming that is equal to or greater than that made by 1 metric ton of carbon dioxide; or

(iii) the person manufacturing or importing the gas for distribution into interstate commerce, or emitting the gas, has submitted to the Administrator, at least 90 days before the start of such manufacture, introduction into commerce, or emission, a notice of such person's manufacture, introduction into commerce, or emission of such gas, and the Administrator has not determined that notice or a substantially similar notice is incomplete.

(B) ALTERNATIVE COMPLIANCE.—*For a gas that is a substitute for a class I or class II substance under title VI and either has been listed as acceptable for use under section 612 or is currently subject to evaluation under section 612, the Administrator may accept the notice and information provided pursuant to that section as fulfilling the obligation under clause (iii) of subparagraph (A).*

(2) REVIEW AND ACTION BY THE ADMINISTRATOR.—

(A) COMPLETENESS.—*Not later than 90 days after receipt of notice under paragraph (1)(A)(iii) or (B), the Administrator shall determine whether the notice is complete.*

(B) DETERMINATION.—*If the Administrator determines that the notice is complete, the Administrator shall, after notice and an opportunity for comment, not later than 12 months after receipt of the notice—*

(i) issue and publish in the Federal Register a determination that 1 metric ton of the gas does not make a contribution to global warming over 100 years that is equal to or greater than that made by 1 metric ton of carbon dioxide and an explanation of the decision; or

(ii) determine that 1 metric ton of the gas makes a contribution to global warming over 100 years that is equal to or greater than that made by 1 metric ton of carbon dioxide, and take the actions described in subsection (b) with respect to such gas.

(f) REGULATIONS.—*Not later than one year after the date of enactment of this title, the Administrator shall promulgate regulations to carry out this section. Such regulations shall include—*

(1) requirements for the contents of a petition submitted under subsection (c);

(2) requirements for the contents of a notice required under subsection (e); and

(3) methods and standards for evaluating the carbon dioxide equivalent value of a gas.

(g) GASES REGULATED UNDER TITLE VI.—*The Administrator shall not designate a gas as a greenhouse gas under this section to the extent that the gas is regulated under title VI.*

(h) SAVINGS CLAUSE.—*Nothing in this section shall be interpreted to relieve any person from complying with the requirements of section 612.*

SEC. 712. CARBON DIOXIDE EQUIVALENT VALUE OF GREENHOUSE GASES.

(a) MEASURE OF QUANTITY OF GREENHOUSE GASES.—*Any provision of this title or title VIII that refers to a quantity or percentage*

of a quantity of greenhouse gases shall mean the quantity or percentage of the greenhouse gases expressed in carbon dioxide equivalents.

(b) INITIAL VALUE.—*Except as provided by the Administrator under this section or section 711—*

(1) the carbon dioxide equivalent value of greenhouse gases for purposes of this Act shall be as follows:

" CARBON DIOXIDE EQUIVALENT OF 1 TON OF LISTED GREENHOUSE GASES

Greenhouse gas (1 metric ton)	Carbon dioxide equivalent (metric tons)
Carbon dioxide	1
Methane	25
Nitrous oxide	298
HFC-23	14,800
HFC-125	3,500
HFC-134a	1,430
HFC-143a	4,470
HFC-152a	124
HFC-227ea	3,220
HFC-236fa	9,810
HFC-4310mee	1,640
CF_4	7,390
C_2F_6	12,200
C_4F_{10}	8,860
C_6F_{14}	9,300
SF_6	22,800
NF_3	17,200

; and

(2) the carbon dioxide equivalent value for purposes of this Act for any greenhouse gas not listed in the table under paragraph (1) shall be the 100-year Global Warming Potentials provided in the Intergovernmental Panel on Climate Change Fourth Assessment Report.

(c) PERIODIC REVIEW.—

(1) Not later than February 1, 2017, and (except as provided in paragraph (3)) not less than every 5 years thereafter, the Administrator shall—

(A) review and, if appropriate, revise the carbon dioxide equivalent values established under this section or section 711(b)(2), based on a determination of the number of metric tons of carbon dioxide that makes the same contribution to global warming over 100 years as 1 metric ton of each greenhouse gas; and

(B) publish in the Federal Register the results of that review and any revisions.

(2) A revised determination published in the Federal Register under paragraph (1)(B) shall take effect for greenhouse gas emissions starting on January 1 of the first calendar year starting at least 9 months after the date on which the revised determination was published.

(3) The Administrator may decrease the frequency of review and revision under paragraph (1) if the Administrator determines that such decrease is appropriate in order to synchronize such review and revision with any similar review process carried out pursuant to the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992, or to an agreement negotiated under that convention, except that in no event shall the Administrator carry out such review and revision any less frequently than every 10 years.

(d) METHODOLOGY.*—In setting carbon dioxide equivalent values, for purposes of this section or section 711, the Administrator shall take into account publications by the Intergovernmental Panel on Climate Change or a successor organization under the auspices of the United Nations Environmental Programme and the World Meteorological Organization.*

SEC. 713. GREENHOUSE GAS REGISTRY.

(a) DEFINITIONS.*—For purposes of this section:*

(1) CLIMATE REGISTRY.*—The term 'Climate Registry' means the greenhouse gas emissions registry jointly established and managed by more than 40 States and Indian tribes in 2007 to collect high-quality greenhouse gas emission data from facilities, corporations, and other organizations to support various greenhouse gas emission reporting and reduction policies for the member States and Indian tribes.*

(2) REPORTING ENTITY.*—The term 'reporting entity' means—*

(A) a covered entity;

(B) an entity that—

(i) would be a covered entity if it had emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level in the definition of covered entity in paragraph (13) of section 700; and

(ii) has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level in the definition of covered entity in paragraph (13) of section 700, provided that the figure of 25,000 tons of carbon dioxide equivalent is read instead as 10,000 tons of carbon dioxide equivalent and the figure of 460,000,000 cubic feet is read instead as 184,000,000 cubic feet;

(C) any other entity that emits a greenhouse gas, or produces, imports, manufactures, or delivers material whose use results or may result in greenhouse gas emissions if the Administrator determines that reporting under this section by such entity will help achieve the purposes of this title or title VIII;

(D) any vehicle fleet with emissions of more than 25,000 tons of carbon dioxide equivalent on an annual basis, if the Administrator determines that the inclusion of such fleet will help achieve the purposes of this title or title VIII; or

(E) any entity that delivers electricity to an energy-intensive facility in an industrial sector that meets the energy or greenhouse gas intensity criteria in section 764(b)(3)(B)(i).

(b) REGULATIONS.—

(1) IN GENERAL.—*Not later than 6 months after the date of enactment of this title, the Administrator shall issue regulations establishing a Federal greenhouse gas registry. Such regulations shall—*

(A) require reporting entities to submit to the Administrator data on—

(i) greenhouse gas emissions in the United States;

(ii) the production and manufacture in the United States, importation into the United States, and, at the discretion of the Administrator, exportation from the United States, of fuels and industrial gases the uses of which result or may result in greenhouse gas emissions;

(iii) deliveries in the United States of natural gas, and any other gas meeting the specifications for commingling with natural gas for purposes of delivery, the combustion of which result or may result in greenhouse gas emissions; and

(iv) the capture and sequestration of greenhouse gases;

(B) require covered entities and, where appropriate, other reporting entities to submit to the Administrator data sufficient to ensure compliance with or implementation of the requirements of this title;

(C) require reporting of electricity delivered to industrial sources in energy-intensive industries;

(D) ensure the completeness, consistency, transparency, accuracy, precision, and reliability of such data;

(E) take into account the best practices from the most recent Federal, State, tribal, and international protocols for the measurement, accounting, reporting, and verification of greenhouse gas emissions, including protocols from the Climate Registry and other mandatory State or multistate authorized programs;

(F) take into account the latest scientific research;

(G) require that, for covered entities with respect to greenhouse gases to which section 722 applies, and, to the extent determined to be appropriate by the Administrator, for covered entities with respect to other greenhouse gases and for other reporting entities, submitted data are based on—

(i) continuous monitoring systems for fuel flow or emissions, such as continuous emission monitoring systems;

(ii) alternative systems that are demonstrated as providing data with the same precision, reliability, accessibility, and timeliness, or, to the extent the Administrator determines is appropriate for reporting small amounts of emissions, the same precision, reliability, and accessibility and similar timeliness, as data provided by continuous monitoring systems for fuel flow or emissions; or

(iii) alternative methodologies that are demonstrated to provide data with precision, reliability, accessibility, and timeliness, or, to the extent the Administrator determines is appropriate for reporting small amounts of emissions, precision, reliability, and accessibility, as similar as is technically feasible to that of data generally provided by continuous monitoring systems for fuel flow or emissions, if the Administrator determines that, with respect to a reporting entity, there is no continuous monitoring system or alternative system described in clause (i) or (ii) that is technically feasible;

(H) require that the Administrator, in determining the extent to which the requirement to use systems or methodologies in accordance with subparagraph (G) is appropriate for reporting entities other than covered entities or for greenhouse gases to which section 722 does not apply, consider the cost of using such systems and methodologies, and of using other systems and methodologies that are available and suitable, for quantifying the emissions involved in light of the purposes of this title, including the goal of collecting consistent entity-wide data;

(I) include methods for minimizing double reporting and avoiding irreconcilable double reporting of greenhouse gas emissions;

(J) establish measurement protocols for carbon capture and sequestration systems, taking into consideration the regulations promulgated under section 813;

(K) require that reporting entities provide the data required under this paragraph in reports submitted electronically to the Administrator, in such form and containing such information as may be required by the Administrator;

(L) include requirements for keeping records supporting or related to, and protocols for auditing, submitted data;

(M) establish consistent policies for calculating carbon content and greenhouse gas emissions for each type of fossil fuel with respect to which reporting is required;

(N) subsequent to implementation of policies developed under subparagraph (M), provide for immediate dissemination, to States, Indian tribes, and on the Internet, of all data reported under this section as soon as practicable after electronic audit by the Administrator and any resulting correction of data, except that data shall not be disseminated under this subparagraph if—

(i) its nondissemination is vital to the national security of the United States, as determined by the President; or

(ii) it is confidential business information that cannot be derived from information that is otherwise publicly available and disclosure of which would likely cause substantial harm to the competitive position of the person from which the information was obtained, except that—

(I) data relating to greenhouse gas emissions, including any upstream or verification data from reporting entities, shall not be considered to be confidential business information; and

(II) data that is confidential business information shall be provided to a State or Indian tribe within whose jurisdiction the reporting entity is located, if—

(aa) the State or Indian tribe has first provided to the Administrator a written opinion from the chief legal officer or counsel of the requesting State agency, or comparable tribal legal counsel, stating that under applicable State or tribal law, the State or Indian tribe has the authority to compel a business that possesses such information to disclose the information to the State or Indian tribe; or

(bb) each affected business is informed of disclosures under this part that pertain to the business, and the State or Indian tribe has demonstrated to the chief legal officer of the Environmental Protection Agency that the use and disclosure by the State or Indian tribe, as applicable, of such information will be governed by State or tribal law and procedures that will provide adequate protection to the interests of affected businesses;

(O) prescribe methods by which the Administrator shall, in cases in which satisfactory data are not submitted to the Administrator for any period of time, estimate emission, production, importation, manufacture, or delivery levels—

(i) for covered entities with respect to greenhouse gas emissions, production, importation, manufacture, or delivery regulated under this title to ensure that emissions, production, importation, manufacture, or deliveries are not underreported, and to create a strong incentive for meeting data monitoring and reporting requirements—

(I) with a conservative estimate of the highest emission, production, importation, manufacture, or delivery levels that may have occurred during the period for which data are missing; or

(II) to the extent the Administrator considers appropriate, with an estimate of such levels assuming the unit is emitting, producing, importing,

manufacturing, or delivering at a maximum potential level during the period, in order to ensure that such levels are not underreported and to create a strong incentive for meeting data monitoring and reporting requirements; and

(ii) for covered entities with respect to greenhouse gas emissions to which section 722 does not apply and for other reporting entities, with a reasonable estimate of the emission, production, importation, manufacture, or delivery levels that may have occurred during the period for which data are missing;

(P) require the designation of a designated representative for each reporting entity;

(Q) require an appropriate certification, by the designated representative for the reporting entity, of accurate and complete accounting of greenhouse gas emissions, as determined by the Administrator; and

(R) include requirements for other data necessary for accurate and complete accounting of greenhouse gas emissions, as determined by the Administrator, including data for quality assurance of monitoring systems, monitors and other measurement devices, and other data needed to verify reported emissions, production, importation, manufacture, or delivery.

(2) TIMING.—

(A) CALENDAR YEARS 2007 THROUGH 2010.—*For a base period of calendar years 2007 through 2010, each reporting entity shall submit annual data required under this section to the Administrator not later than March 31, 2011. The Administrator may waive or modify reporting requirements for calendar years 2007 through 2010 for categories of reporting entities to the extent that the Administrator determines that the reporting entities did not keep data or records necessary to meet reporting requirements. The Administrator may, in addition to or in lieu of such requirements, collect information on energy consumption and production.*

(B) SUBSEQUENT CALENDAR YEARS.—*For calendar year 2011 and each subsequent calendar year, each reporting entity shall submit quarterly data required under this section to the Administrator not later than 60 days after the end of the applicable quarter, except when the data is already being reported to the Administrator on an earlier timeframe for another program.*

(3) WAIVER OF REPORTING REQUIREMENTS.—*The Administrator may waive reporting requirements under this section for specific entities to the extent that the Administrator determines that sufficient and equally or more reliable verified and timely data are available to the Administrator and the public on the Internet under other mandatory statutory requirements.*

(4) ALTERNATIVE THRESHOLD.—*The Administrator may, by rule, establish applicability thresholds for reporting under this section using alternative metrics and levels, provided that such*

metrics and levels are easier to administer and cover the same size and type of sources as the threshold defined in this section.

(c) INTERRELATIONSHIP WITH OTHER SYSTEMS.—*In developing the regulations issued under subsection (b), the Administrator shall take into account the work done by the Climate Registry and other mandatory State or multistate programs. Such regulations shall include an explanation of any major differences in approach between the system established under the regulations and such registries and programs.*

SEC. 714. PERFLUOROCARBON AND OTHER NONHYDROFLUOROCARBON FLUORINATED SUBSTANCE PRODUCTION REGULATION.

(a) DEFINITIONS.—*In this section:*

(1) BEST ACHIEVABLE PERFORMANCE STANDARD.—*The term 'best achievable performance standard' means a limitation on total emissions based on the maximum degree of reduction of fluorinated gases that are greenhouse gases subject to regulation under this Act emitted during the production of nonhydrofluorocarbon fluorinated substances at covered entities that the Administrator, taking into consideration energy, environmental, economic impacts, and other costs, determines to be achievable for covered entities through application of production process optimization and available methods, control technologies or systems, and management techniques or practices.*

(2) NONHYDROFLUOROCARBON FLUORINATED SUBSTANCE.—*The term 'nonhydrofluorocarbon fluorinated substance' means a substance included on the list under subsection (d) that—*

(A) is not listed as a class I or class II substance under title VI; and

(B) is not—

(i) sulfur hexafluoride; or

(ii) nitrogen trifluoride.

(b) DETERMINATION BY ADMINISTRATOR.—

(1) IN GENERAL.—*Not later than 1 year after the date of enactment of this section, the Administrator shall determine, based on the criteria described in paragraph (2), whether fluorinated gases that are greenhouse gases emitted during the production of nonhydrofluorocarbon fluorinated substances should be regulated in accordance with—*

(A) subsection (c); or

(B) the applicable requirements of section 722 relating to emissions of greenhouse gases during fluorinated substance production at covered entities.

(2) CRITERIA FOR DETERMINATION.—*In making the determination under paragraph (1), the Administrator shall take into consideration—*

(A) whether an equivalent or greater level of total emissions reductions could be achieved under subsection (c), as compared to the emissions reductions that would be achieved under the applicable requirements of section 722 relating to emissions of greenhouse gases during fluorinated substance production at covered entities; and

(B) such other criteria as the Administrator determines to be appropriate.

(c) GREENHOUSE GAS EMISSIONS FROM NONHYDROFLUOROCARBON FLUORINATED SUBSTANCE PRODUCTION.—

(1) IN GENERAL.—*If the Administrator makes the determination described in subsection (b)(1)(A), not later than 18 months after the date of enactment of this section, the Administrator shall promulgate regulations applicable to covered entities that require fluorinated gases that are greenhouse gases emitted during the production of nonhydrofluorocarbon fluorinated substances at those covered entities to meet the best achievable performance standard.*

(2) BEST ACHIEVABLE PERFORMANCE STANDARD REVIEW.—*The Administrator shall, at the discretion of the Administrator—*

(A) not later than 2 years after the date of establishment of a best achievable performance standard, and every 2 years thereafter—

(i) review the best achievable performance standard; and

(ii) as necessary, establish a more stringent best available performance standard that reduces emissions, to the maximum extent practicable, in accordance with the economy-wide reduction goals referred to in section 702; or

(B) not later than 2 years after the date of establishment of a best achievable performance standard, and every 10 years thereafter, establish a 10-year schedule under which each applicable covered entity shall incrementally implement a more stringent best achievable performance standard that reduces, to the maximum extent practicable, emissions in accordance with the economy-wide reduction goals referred to in section 702.

(3) EXCLUSIVITY.—*If the Administrator makes the determination described in subsection (b)(1)(A), the requirements of this subsection relating to control of emissions of fluorinated gases that are greenhouse gases during the production of nonhydrofluorocarbon fluorinated substances shall apply in lieu of the requirements of section 722 relating to emissions of fluorinated gases that are greenhouse gases during fluorinated substance production at covered entities.*

(d) LIST OF NONHYDROFLUOROCARBON FLUORINATED SUBSTANCES.—

(1) INITIAL LIST.—*If the Administrator makes the determination described in subsection (b)(1)(A), not later than 2 years after the date of enactment of this section, the Administrator shall publish a list of nonhydrofluorocarbon fluorinated substances subject to regulation under this section.*

(2) ADDITIONS TO LIST.—*The Administrator may include on the list published under paragraph (1) any substance that meets the requirements described in subsection (a)(2).*

PART C—PROGRAM RULES

SEC. 721. EMISSION ALLOWANCES.

(a) IN GENERAL.—*The Administrator shall establish a separate quantity of emission allowances for each calendar year starting in 2012, in the quantities prescribed under subsection (e).*

(b) IDENTIFICATION NUMBERS.—*The Administrator shall assign to each emission allowance established under subsection (a) a unique identification number that includes the vintage year for that emission allowance.*

(c) LEGAL STATUS OF EMISSION ALLOWANCES.—

(1) IN GENERAL.—*An allowance established by the Administrator under this title does not constitute a property right.*

(2) TERMINATION OR LIMITATION.—*Nothing in this Act or any other provision of law shall be construed to limit or alter the authority of the United States, including the Administrator acting pursuant to statutory authority, to terminate or limit allowances, offset credits, or term offset credits.*

(3) OTHER PROVISIONS UNAFFECTED.—*Except as otherwise specified in this Act, nothing in this Act relating to allowances, offset credits, or term offset credits established or issued under this title shall affect the application of any other provision of law to a covered entity, or the responsibility for a covered entity to comply with any such provision of law.*

(d) SAVINGS PROVISION.—*Nothing in this part shall be construed as requiring a change of any kind in any State or tribal law regulating electric utility rates and charges, or as affecting any State or tribal law regarding such State regulation, or as limiting State or tribal regulation (including any prudency review) under such a State or tribal law. Nothing in this part shall be construed as modifying the Federal Power Act (16 U.S.C. 791a et seq.) or as affecting the authority of the Federal Energy Regulatory Commission under that Act. Nothing in this part shall be construed to interfere with or impair any program for competitive bidding for power supply in a State in which such program is established.*

(e) ALLOWANCES FOR EACH CALENDAR YEAR.—

(1) IN GENERAL.—*Except as provided in paragraph (2), the number of emission allowances established by the Administrator under subsection (a) for each calendar year shall be as provided in the following table:*

Calendar Year	Emission Allowances (MtCO2e)
2012	4,627
2013	4,544
2014	5,053
2015	5,003
2016	5,482
2017	5,261
2018	5,132
2019	5,002
2020	4,873
2021	4,739
2022	4,605
2023	4,471
2024	4,337
2025	4,203
2026	4,069
2027	3,935
2028	3,801
2029	3,667
2030	3,533
2031	3,408
2032	3,283
2033	3,158
2034	3,033
2035	2,908
2036	2,784
2037	2,659
2038	2,534
2039	2,409
2040	2,284
2041	2,159
2042	2,034
2043	1,910
2044	1,785
2045	1,660
2046	1,535
2047	1,410
2048	1,285
2049	1,160
2050 and each calendar year thereafter	1,035

(2) REVISION.—

(A) IN GENERAL.—*The Administrator may adjust, in accordance with subparagraph (B), the number of emission allowances established pursuant to paragraph (1) if, after*

notice and an opportunity for public comment, the Administrator determines that—

(i) United States greenhouse gas emissions in 2005 were other than 7,206 million metric tons carbon dioxide equivalent;

(ii) if the requirements of this title for 2012 had been in effect in 2005, section 722 would have required emission allowances to be held for other than 66.2 percent of United States greenhouse gas emissions in 2005;

(iii) if the requirements of this title for 2014 had been in effect in 2005, section 722 would have required emission allowances to be held for other than 75.7 percent of United States greenhouse gas emissions in 2005; or

(iv) if the requirements of this title for 2016 had been in effect in 2005, section 722 would have required emission allowances to be held for other than 84.5 percent United States greenhouse gas emissions in 2005.

(B) ADJUSTMENT FORMULA.—

(i) IN GENERAL.—*If the Administrator adjusts under this paragraph the number of emission allowances established pursuant to paragraph (1), the number of emission allowances the Administrator establishes for any given calendar year shall equal the product of—*

(I) United States greenhouse gas emissions in 2005, expressed in tons of carbon dioxide equivalent;

(II) the percent of United States greenhouse gas emissions in 2005, expressed in tons of carbon dioxide equivalent, that would have been subject to section 722 if the requirements of this title for the given calendar year had been in effect in 2005; and

(III) the percentage set forth for that calendar year in section 703(a), or determined under clause (ii) of this subparagraph.

(ii) TARGETS.—*In applying the portion of the formula in clause (i)(III) of this subparagraph, for calendar years for which a percentage is not listed in section 703(a), the Administrator shall use a uniform annual decline in the amount of emissions between the years that are specified.*

(iii) CARBON DIOXIDE EQUIVALENT VALUE.—*If the Administrator adjusts under this paragraph the number of emission allowances established pursuant to paragraph (1), the Administrator shall use the carbon dioxide equivalent values established pursuant to section 712.*

(iv) LIMITATION ON ADJUSTMENT TIMING.—*Once a calendar year has started, the Administrator may not adjust the number of emission allowances to be established for that calendar year.*

(C) LIMITATION ON ADJUSTMENT AUTHORITY.—*The Administrator may adjust under this paragraph the number*

of emission allowances to be established pursuant to paragraph (1) only once.

(f) COMPENSATORY ALLOWANCE.—

(1) IN GENERAL.—*The regulations promulgated under subsection (h) shall provide for the establishment and distribution of compensatory allowances for—*

(A) the destruction, in 2012 or later, of fluorinated gases that are greenhouse gases if—

(i) allowances or offset credits were retired for their production or importation; and

(ii) such gases are not required to be destroyed under any other provision of law;

(B) the nonemissive use, in 2012 or later, of petroleum-based or coal-based liquid or gaseous fuel, petroleum coke, natural gas liquid, or natural gas as a feedstock, if allowances or offset credits were retired for the greenhouse gases that would have been emitted from their combustion; and

(C) the conversionary use, in 2012 or later, of fluorinated gases in a manufacturing process, including semiconductor research or manufacturing, if allowances or offset credits were retired for the production or importation of such gas.

(2) ESTABLISHMENT AND DISTRIBUTION.—

(A) IN GENERAL.—*Not later than 90 days after the end of each calendar year, the Administrator shall establish and distribute to the entity taking the actions described in subparagraph (A), (B), or (C) of paragraph (1) a quantity of compensatory allowances equivalent to the number of tons of carbon dioxide equivalent of avoided emissions achieved through such actions. In establishing the quantity of compensatory allowances, the Administrator shall take into account the carbon dioxide equivalent value of any greenhouse gas resulting from such action.*

(B) SOURCE OF ALLOWANCES.—*Compensatory allowances established under this subsection shall not be emission allowances established under subsection (a).*

(C) IDENTIFICATION NUMBERS.—*The Administrator shall assign to each compensatory allowance established under subparagraph (A) a unique identification number.*

(3) DEFINITIONS.—*For purposes of this subsection—*

(A) the term 'destruction' means the conversion of a greenhouse gas by thermal, chemical, or other means to another gas or set of gases with little or no carbon dioxide equivalent value;

(B) the term 'nonemissive use' means the use of fossil fuel as a feedstock in an industrial or manufacturing process to the extent that greenhouse gases are not emitted from such process, and to the extent that the products of such process are not intended for use as, or to be contained in, a fuel; and

(C) the term 'conversionary use' means the conversion during research or manufacturing of a fluorinated gas into another greenhouse gas or set of gases with a lower carbon dioxide equivalent value.

(4) FEEDSTOCK EMISSIONS STUDY.—

(A) The Administrator may conduct a study to determine the extent to which petroleum-based or coal-based liquid or gaseous fuel, petroleum coke, natural gas liquid, or natural gas are used as feedstocks in manufacturing processes to produce products and the greenhouse gas emissions resulting from such uses.

(B) If as a result of such a study, the Administrator determines that the use of such products by noncovered sources results in substantial emissions of greenhouse gases or their precursors and that such emissions have not been adequately addressed under other requirements of this Act, the Administrator may, after notice and comment rulemaking, promulgate a regulation reducing compensatory allowances commensurately if doing so will not result in leakage.

(g) FLUORINATED GASES ASSESSMENT.—

(1) IN GENERAL.—*Not later than March 31, 2014, the Administrator shall conduct an assessment of the regulation of non-hydrofluorocarbon fluorinated gases under this title to determine whether the most appropriate point of regulation of those gases is at—*

(A) the gas manufacturer or importer level; or

(B) the downstream source of the emissions.

(2) MODIFICATION OF DEFINITION.—*If the Administrator determines, based on consideration of environmental effectiveness, cost-effectiveness, administrative feasibility, extent of coverage of emissions, and competitiveness considerations, that emissions of non-hydrofluorocarbon fluorinated gases can best be regulated by designating downstream emission sources as covered entities with compliance obligations under section 722, the Administrator shall—*

(A) after providing notice and an opportunity for comment, modify the definition of the term 'covered entity' with respect to fluorinated gases (other than hydrofluorocarbons) accordingly; and

(B) establish such requirements as are necessary to ensure compliance by the covered entities with the requirements of this title.

(h) REGULATIONS.—*Not later than 24 months after the date of enactment of this title, the Administrator shall promulgate regulations to carry out the provisions of this title.*

SEC. 722. PROHIBITION OF EXCESS EMISSIONS.

(a) PROHIBITION.—*Except as provided in subsection (c), effective January 1, 2012, each covered entity is prohibited from emitting greenhouse gases, and having attributable greenhouse gas emissions, in combination, in excess of its allowable emissions level. A covered entity's allowable emissions level for each calendar year is the number of emission allowances (or credits or other allowances as provided in subsection (d)) it holds as of 12:01 a.m. on April 1 (or a later date established by the Administrator under subsection (j)) of the following calendar year.*

(b) METHODS OF DEMONSTRATING COMPLIANCE.—*Except as otherwise provided in this section, the owner or operator of a covered entity shall not be considered to be in compliance with the prohibition*

in subsection (a) unless, as of 12:01 a.m. on April 1 (or a later date established by the Administrator under subsection (j)) of each calendar year starting in 2013, the owner or operator holds a quantity of emission allowances (or credits or other allowances as provided in subsection (d)) at least as great as the quantity calculated as follows:

(1) ELECTRICITY SOURCES.*—For a covered entity described in section 700(13)(A), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that such covered entity emitted in the previous calendar year, excluding emissions resulting from the combustion of—*

(A) petroleum-based or coal-based liquid fuel;

(B) natural gas liquid;

(C) renewable biomass or gas derived from renewable biomass; or

(D) petroleum coke.

(2) FUEL PRODUCERS AND IMPORTERS.*—For a covered entity described in section 700(13)(B), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that would be emitted from the combustion of any petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid, produced or imported by such covered entity during the previous calendar year for sale or distribution in interstate commerce, assuming no capture and sequestration of any greenhouse gas emissions.*

(3) INDUSTRIAL GAS PRODUCERS AND IMPORTERS.*—For a covered entity described in section 700(13)(C), 1 emission allowance for each ton of carbon dioxide equivalent of fossil fuel-based carbon dioxide, nitrous oxide, or any other fluorinated gas that is a greenhouse gas (except for nitrogen trifluoride), or any combination thereof, produced or imported by such covered entity during the previous calendar year for sale or distribution in interstate commerce.*

(4) NITROGEN TRIFLUORIDE SOURCES.*—For a covered entity described in section 700(13)(D), 1 emission allowance for each ton of carbon dioxide equivalent of nitrogen trifluoride that such covered entity emitted in the previous calendar year.*

(5) GEOLOGICAL SEQUESTRATION SITES.*—For a covered entity described in section 700(13)(E), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that such covered entity emitted in the previous calendar year.*

(6) INDUSTRIAL STATIONARY SOURCES.*—For a covered entity described in section 700(13)(F), (G), or (H), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that such covered entity emitted in the previous calendar year, excluding emissions resulting from—*

(A) the combustion of petroleum-based or coal-based liquid fuel;

(B) the combustion of natural gas liquid;

(C) the combustion of renewable biomass or gas derived from renewable biomass;

(D) the combustion of petroleum coke; or

(E) the use of any fluorinated gas that is a greenhouse gas purchased for use at that covered entity, except for nitrogen trifluoride.

(7) INDUSTRIAL FOSSIL FUEL-FIRED COMBUSTION DEVICES.—*For a covered entity described in section 700(13)(I), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that the devices emitted in the previous calendar year, excluding emissions resulting from the combustion of—*

(A) petroleum-based or coal-based liquid fuel;

(B) natural gas liquid;

(C) renewable biomass or gas derived from renewable biomass; or

(D) petroleum coke.

(8) NATURAL GAS LOCAL DISTRIBUTION COMPANIES.—*For a covered entity described in section 700(13)(J), 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that would be emitted from the combustion of the natural gas, and any other gas meeting the specifications for commingling with natural gas for purposes of delivery, that such entity delivered during the previous calendar year to customers that are not covered entities, assuming no capture and sequestration of that greenhouse gas.*

(9) R&D FACILITIES.—

(A) IN GENERAL.—*For a qualified R&D facility that emitted 25,000 tons per year or more carbon dioxide equivalent in the previous calendar year, 1 emission allowance for each ton of carbon dioxide equivalent of greenhouse gas that such facility emitted in the previous calendar year.*

(B) TREATMENT.—*A qualified R&D facility shall be treated as a separate covered entity solely for purposes of applying the requirements of this subsection.*

(10) ALGAE-BASED FUELS.—*Where carbon dioxide (or another greenhouse gas) generated by a covered entity is used as an input in the production of algae-based fuels, the Administrator shall ensure that emission allowances are required to be held either for the carbon dioxide generated by a covered entity used to grow the algae or for the portion of the carbon dioxide emitted from combustion of the fuel produced from such algae that is attributable to carbon dioxide generated by a covered entity, but not for both.*

(11) FUGITIVE EMISSIONS.—*The greenhouse gas emissions to which paragraphs (1), (4), (6), and (7) apply shall not include fugitive emissions of greenhouse gas, except to the extent the Administrator determines that data on the carbon dioxide equivalent value of greenhouse gas in the fugitive emissions can be provided with sufficient precision, reliability, accessibility, and timeliness to ensure the integrity of emission allowances, the allowance tracking system, and the limits on emissions.*

(12) EXPORT EXEMPTION.—*This section shall not apply to any petroleum-based or coal-based liquid fuel, petroleum coke, natural gas liquid, fossil fuel-based carbon dioxide, nitrous oxide, or fluorinated gas that is exported for sale or use.*

(13) NATURAL GAS LIQUIDS.—*Notwithstanding subsection (a), if the owner or operator of a covered entity described in section*

700(13)(B) that produces natural gas liquids does not take ownership of the liquids, and is not responsible for the distribution or use of the liquids in commerce, the owner of the liquids shall be responsible for compliance with this section, section 723, and other relevant sections of this title with respect to such liquids. In the regulations promulgated under section 721, the Administrator shall include such provisions with respect to such liquids as the Administrator determines are appropriate to determine and ensure compliance, and to penalize noncompliance. In such a case, the owner of the covered entity shall provide to the Administrator, in a manner to be determined by the Administrator, information regarding the quantity and ownership of liquids produced at the covered entity.

(14) APPLICATION OF MULTIPLE PARAGRAPHS.—*For a covered entity to which more than 1 of paragraphs (1) through (8) apply, all applicable paragraphs shall apply, except that not more than 1 emission allowance shall be required for the same emission.*

(c) PHASE-IN OF PROHIBITION.—

(1) INDUSTRIAL STATIONARY SOURCES.—*The prohibition under subsection (a) shall first apply to a covered entity described in section 700(13)(D), (F), (G), (H), or (I), with respect to emissions occurring during calendar year 2014.*

(2) SMALL BUSINESS REFINERS.—*The prohibition under subsection (a) shall first apply to a covered entity described in section 700(13)(F)(viii) that is a small business refiner with respect to emissions during calendar year 2015.*

(3) NATURAL GAS LOCAL DISTRIBUTION COMPANIES.—*The prohibition under subsection (a) shall first apply to a covered entity described in section 700(13)(J) with respect to deliveries occurring during calendar year 2016.*

(d) ADDITIONAL METHODS.—*In addition to using the method of compliance described in subsection (b), a covered entity may do the following:*

(1) OFFSET CREDITS.—

(A) CREDITS.—

(i) IN GENERAL.—*Covered entities collectively may, in accordance with this paragraph, use offset credits to demonstrate compliance for up to a maximum of 2,000,000,000 tons of greenhouse gas emissions annually.*

(ii) DEMONSTRATION OF COMPLIANCE.—*In any calendar year, a covered entity may demonstrate compliance by holding 1 domestic offset credit or 1.25 international offset credits in lieu of an emission allowance, except as provided in subparagraph (D), up to a total number of offset credits described in subparagraph (B).*

(B) APPLICABLE PERCENTAGE.—

(i) IN GENERAL.—*The total number of offset credits referred to in subparagraph (A)(ii) for a covered entity for a given calendar year shall be determined by—*

(I) dividing—

(aa) the tons of carbon dioxide equivalent of greenhouse gas emissions of the covered entity

(except for the types of emissions excluded under subparagraphs (A) through (D) of subsection (b)(1), subparagraphs (A) through (E) of subsection (b)(6), and subparagraphs (A) through (D) of subsection (b)(7)) and attributable greenhouse gas emissions for the year before the preceding calendar year; by

(bb) the sum of the tons of carbon dioxide equivalent of greenhouse gas emissions of all covered entities (except for the types of emissions excluded under subparagraphs (A) through (D) of subsection (b)(1), subparagraphs (A) through (E) of subsection (b)(6), and subparagraphs (A) through (D) of subsection (b)(7)) and attributable greenhouse gas emissions for the year before the preceding calendar year; and

(II) multiplying the quotient obtained under subclause (I) by 2,000,000,000.

(ii) APPLICABILITY.—*Clause (i) shall apply to a covered entity (including a covered entity that commenced operation during the preceding calendar year) even if the covered entity had no greenhouse gas emissions or attributable greenhouse gas emissions described in that clause.*

(iii) OFFSET CREDITS.—*Not more than ¾ of the applicable percentage under this paragraph may be used by holding domestic offset credits, and not more than ¼ of the applicable percentage under this paragraph may be used by holding international offset credits, except as provided in subparagraph (C).*

(C) MODIFIED PERCENTAGES.—*If the Administrator determines that domestic offset credits available for use in demonstrating compliance in any calendar year at domestic offset prices generally equal to or less than allowance prices, are likely to offset less than 900,000,000 tons of greenhouse gas emissions (measured in tons of carbon dioxide equivalents), the Administrator shall increase the percent of emissions that can be offset through the use of international offset credits (and decrease the percent of emissions that can be allowed through the use of domestic offset credits by the same amount) to reflect the amount that 1,500,000,000 exceeds the number of domestic offset credits the Administrator determines is available for that year, up to a maximum of 750,000,000 tons of greenhouse gas emissions.*

(D) INTERNATIONAL OFFSET CREDITS.—*Notwithstanding subparagraph (A), to demonstrate compliance prior to calendar year 2018, a covered entity may use 1 international offset credit in lieu of an emission allowance up to the amount permitted under this paragraph.*

(E) PRESIDENT'S RECOMMENDATION.—*The President may make a recommendation to Congress as to whether the number 2,000,000,000 specified in subparagraphs (A) and (B) should be increased or decreased.*

(2) TERM OFFSET CREDITS.—

(A) IN GENERAL.—*Covered entities may, in accordance with this paragraph, use non-expired term offset credits instead of domestic offset credits for purposes of temporarily demonstrating compliance with this section.*

(B) AMOUNT.—*The combined quantity of term offset credits and domestic offset credits used by a covered entity to demonstrate compliance for its emissions or attributable greenhouse gas emissions in any given year shall not exceed the quantity of domestic offset credits that a covered entity is entitled to use for that year to demonstrate compliance in accordance with paragraph (1).*

(C) EXPIRATION.—*A term offset credit shall expire in the year after its term ends. The term of a term offset credit shall be calculated by adding to the year of issuance the number of years equal to the length of the crediting period for the practice or project for which the term offset credit was issued, but in no case shall be later than the date 5 years from the date of issuance.*

(D) DEMONSTRATING COMPLIANCE UPON EXPIRATION OF TERM OFFSET CREDIT.—*With respect to the emissions for which a covered entity is using term offset credits to demonstrate compliance temporarily with this section, the owner or operator of a covered entity shall not be considered to be in compliance with the prohibition in subsection (a) unless, as of 12:01 a.m. on April 1 (or a later date established by the Administrator under subsection (j)) of the calendar year in which a term offset credit expires, the owner or operator holds—*

(i) for purposes of finally demonstrating compliance, an allowance or a domestic offset credit; or

(ii) for purposes of temporarily demonstrating compliance, a non-expired term offset credit.

(E) INAPPLICABILITY OF PERCENTAGE LIMITATIONS.—*Domestic offset credits used for purposes of finally demonstrating compliance under this subparagraph shall not be subject to the percentage limitations in subparagraph (B).*

(F) FINANCIAL ASSURANCE.—*A covered entity may not use a term offset credit to demonstrate compliance temporarily unless it simultaneously provides to the Administrator financial assurance that, at the end of the term offset credit's crediting term, the covered entity will have sufficient resources to obtain the quantity of allowances or credits necessary to demonstrate final compliance. The Administrator shall issue regulations establishing requirements for such financial assurance, which shall take into account the increased risk associated with longer crediting terms. These regulations shall take into account the total number of tons of carbon dioxide equivalent of greenhouse gas emissions for which a covered entity is demonstrating compliance temporarily, and may set a limit on this amount. In the event that a covered entity that used term offset credits to demonstrate compliance temporarily fails to meet the re-*

quirements of subparagraph (D) at the end of the term offset credits' crediting term, if the financial assurance mechanism fails to provide to the Administrator the number of allowances or offset credits for which the crediting term has expired, then the Administrator shall retire that number of allowances with the vintage year 2 years after the year in which the term offset credit expires in the same amount. Allowances so retired shall not be counted as emission allowances established for that calendar year under section 721(a).

(3) INTERNATIONAL EMISSION ALLOWANCES.*—To demonstrate compliance, a covered entity may hold an international emission allowance in lieu of an emission allowance, except as modified under section 728(d).*

(4) COMPENSATORY ALLOWANCES.*—To demonstrate compliance, a covered entity may hold a compensatory allowance obtained under section 721(f) in lieu of an emission allowance.*

(e) RETIREMENT OF ALLOWANCES AND CREDITS.*—As soon as practicable after a deadline established for covered entities to demonstrate compliance with this title, the Administrator shall retire the quantity of allowances or credits required to be held under this title.*

(f) ALTERNATIVE METRICS.*—For categories of covered entities described in subparagraph (B), (C), (D), (G), (H), or (I) of section 700(13), the Administrator may, by rule, establish an applicability threshold for inclusion under those subparagraphs using an alternative metric and level, provided that such metric and level are easier to administer and cover the same size and type of sources as the threshold defined in such subparagraphs.*

(g) THRESHOLD REVIEW.*—For each category of covered entities described in subparagraph (B), (C), (D), (G), (H), or (I) of section 700(13), the Administrator shall, in 2020 and once every 8 years thereafter, review the carbon dioxide equivalent emission thresholds that are used to define covered entities. After consideration of—*

(1) emissions from covered entities in each such category, and from other entities of the same type that emit less than the threshold amount for the category (including emission sources that commence operation after the date of enactment of this title that are not covered entities); and

(2) whether greater greenhouse gas emission reductions can be cost-effectively achieved by lowering the applicable threshold,

the Administrator may by rule lower such threshold to not less than 10,000 tons of carbon dioxide equivalent emissions. In determining the cost effectiveness of potential reductions from lowering the threshold for covered entities, the Administrator shall consider alternative regulatory greenhouse gas programs, including setting standards under other titles of this Act.

(h) DESIGNATED REPRESENTATIVES.*—The regulations promulgated under section 721(h) shall require that each covered entity, and each entity holding allowances or credits or receiving allowances or credits from the Administrator under this title, select a designated representative.*

(i) EDUCATION AND OUTREACH.—

(1) IN GENERAL.—*The Administrator shall establish and carry out a program of education and outreach to assist covered entities, especially entities having little experience with environmental regulatory requirements similar or comparable to those under this title, in preparing to meet the compliance obligations of this title. Such program shall include education with respect to using markets to effectively achieve such compliance.*

(2) FAILURE TO RECEIVE INFORMATION.—*A failure to receive information or assistance under this subsection may not be used as a defense against an allegation of any violation of this title.*

(j) ADJUSTMENT OF DEADLINE.—*The Administrator may, by rule, establish a deadline for demonstrating compliance, for a calendar year, later than the date provided in subsection (a), as necessary to ensure the availability of emissions data, but in no event shall the deadline be later than June 1.*

(k) NOTICE REQUIREMENT FOR COVERED ENTITIES RECEIVING NATURAL GAS FROM NATURAL GAS LOCAL DISTRIBUTION COMPANIES.—*The owner or operator of a covered entity that takes delivery of natural gas from a natural gas local distribution company shall, not later than September 1 of each calendar year, notify such natural gas local distribution company in writing that such entity will qualify as a covered entity under this title for that calendar year.*

(l) COMPLIANCE OBLIGATION.—*For purposes of this title, the year of a compliance obligation is the year in which compliance is determined, not the year in which the greenhouse gas emissions occur or the covered entity has attributable greenhouse gas emissions.*

SEC. 723. PENALTY FOR NONCOMPLIANCE.

(a) ENFORCEMENT.—*A violation of any prohibition of, requirement of, or regulation promulgated pursuant to this title shall be a violation of this Act. It shall be a violation of this Act for a covered entity to emit greenhouse gases, and have attributable greenhouse gas emissions, in combination, in excess of its allowable emissions level as provided in section 722(a). Each ton of carbon dioxide equivalent for which a covered entity fails to demonstrate compliance under section 722(b) shall be a separate violation. In the event that a covered entity fails to demonstrate compliance at the expiration of a term of offset credits crediting term as required by section 722(d)(2)(D), the year of the violation shall be the year in which the term offset credit expires.*

(b) EXCESS EMISSIONS PENALTY.—

(1) IN GENERAL.—*The owner or operator of any covered entity that fails for any year to comply, on the deadline described in section 722(a) or (j), shall be liable for payment to the Administrator of an excess emissions penalty in the amount described in paragraph (2).*

(2) AMOUNT.—*The amount of an excess emissions penalty required to be paid under paragraph (1) shall be equal to the product obtained by multiplying—*

(A) the tons of carbon dioxide equivalent of greenhouse gas emissions or attributable greenhouse gas emissions for which the owner or operator of a covered entity failed to comply under section 722(b) on the deadline; by

(B) twice the fair market value of emission allowances established for emissions occurring in the calendar year for which the emission allowances were due.

(3) TIMING.*—An excess emissions penalty required under this subsection shall be immediately due and payable to the Administrator, without demand, in accordance with regulations promulgated by the Administrator, which shall be issued not later than 2 years after the date of enactment of this title.*

(4) NO EFFECT ON LIABILITY.*—An excess emissions penalty due and payable by the owners or operators of a covered entity under this subsection shall not diminish the liability of the owners or operators for any fine, penalty, or assessment against the owners or operators for the same violation under any other provision of this Act or any other law.*

(c) EXCESS EMISSIONS ALLOWANCES.*—The owner or operator of a covered entity that fails for any year to comply on the deadline described in section 722(a) or (j) shall be liable to offset the covered entity's excess combination of greenhouse gases emitted and attributable greenhouse gas emissions by an equal quantity of emission allowances during the following calendar year, or such longer period as the Administrator may prescribe. During the year in which the covered entity failed to comply, or any year thereafter, the Administrator may deduct the emission allowances required under this subsection to offset the covered entity's excess actual or attributable emissions.*

SEC. 724. TRADING.

(a) PERMITTED TRANSACTIONS.*—Except as otherwise provided in this title, the lawful holder of an emission allowance, compensatory allowance, or offset credit may, without restriction, sell, exchange, transfer, hold for compliance in accordance with section 722, or request that the Administrator retire the emission allowance, compensatory allowance, or offset credit.*

(b) NO RESTRICTION ON TRANSACTIONS.*—The privilege of purchasing, holding, selling, exchanging, transferring, and requesting retirement of emission allowances, compensatory allowances, or offset credits shall not be restricted to the owners and operators of covered entities, except as otherwise provided in this title.*

(c) EFFECTIVENESS OF ALLOWANCE TRANSFERS.*—No transfer of an allowance or offset credit shall be effective for purposes of this title until a certification of the transfer, signed by the designated representative of the transferor, is received and recorded by the Administrator in accordance with regulations promulgated under section 721(h).*

(d) ALLOWANCE TRACKING SYSTEM.*—The regulations promulgated under section 721(h) shall include a system for issuing, recording, holding, and tracking allowances, offset credits, and term offset credits that shall specify all necessary procedures and requirements for an orderly and competitive functioning of the allowance and offset credit markets. Such regulations shall provide for appropriate publication of the information in the system on the Internet.*

SEC. 725. BANKING AND BORROWING.

(a) BANKING.*—An emission allowance may be used to comply with section 722 or 723 for emissions in—*

(1) the vintage year for the allowance; or

(2) any calendar year subsequent to the vintage year for the allowance.

(b) EXPIRATION.—

(1) REGULATIONS.—*The Administrator may establish by regulation criteria and procedures for determining whether, and for implementing a determination that, the expiration of an allowance, credit, or term offset credit established or issued by the Administrator under this title, or expiration of the ability to use an international emission allowance to comply with section 722, is necessary to ensure the authenticity and integrity of allowances, credits, or term offset credits or the allowance tracking system.*

(2) GENERAL RULE.—*An allowance, credit, or term offset credit established or issued by the Administrator under this title shall not expire unless—*

(A) it is retired by the Administrator as required under this title; or

(B) it is determined to expire or to have expired by a specific date by the Administrator in accordance with regulations promulgated under paragraph (1).

(3) INTERNATIONAL EMISSION ALLOWANCES.—*The ability to use an international emission allowance to comply with section 722 shall not expire unless—*

(A) the allowance is retired by the Administrator as required by this title; or

(B) the ability to use such allowance to meet such compliance obligation requirements is determined to expire or to have expired by a specific date by the Administrator in accordance with regulations promulgated under paragraph (1).

(c) BORROWING FUTURE VINTAGE YEAR ALLOWANCES.—

(1) BORROWING WITHOUT INTEREST.—*In addition to the uses described in subsection (a), an emission allowance may be used to comply with section 722(a) or 723 for emissions, production, importation, manufacture, or deliveries in the calendar year immediately preceding the vintage year for the allowance.*

(2) BORROWING WITH INTEREST.—

(A) IN GENERAL.—*A covered entity may demonstrate compliance under subsection (b) in a specific calendar year for up to 15 percent of its emissions by holding emission allowances with a vintage year 1 to 5 years later than that calendar year.*

(B) LIMITATIONS.—*An emission allowance borrowed pursuant to this paragraph shall be an emission allowance that is established by the Administrator for a specific future calendar year under section 721(a) and that is held by the borrower.*

(C) PREPAYMENT OF INTEREST.—*For each emission allowance that an owner or operator of a covered entity borrows pursuant to this paragraph, such owner or operator shall, at the time it borrows the allowance, hold for retirement by the Administrator a quantity of emission allowances that is equal to the product obtained by multiplying—*

(i) 0.08; by

(ii) the number of years between the calendar year in which the allowance is being used to satisfy a compliance obligation and the vintage year of the allowance.

SEC. 726. MARKET STABILITY RESERVE.

(a) MARKET STABILITY RESERVE AUCTIONS.—

(1) IN GENERAL.—*Once each quarter of each calendar year for which allowances are established under section 721(a), the Administrator shall auction market stability reserve allowances.*

(2) RESTRICTION TO COVERED ENTITIES.—*In each auction conducted under paragraph (1), only covered entities that the Administrator expects will be required to comply with section 722 in the following calendar year shall be eligible to make purchases.*

(b) POOL OF EMISSION ALLOWANCES FOR MARKET STABILITY RESERVE AUCTIONS.—

(1) FILLING THE MARKET STABILITY RESERVE INITIALLY.—*The Administrator shall, not later than 2 years after the date of enactment of this title, establish a market stability reserve account, and shall place in that account a quantity of emission allowances established under section 771(d)(9).*

(2) SUPPLEMENTING THE MARKET STABILITY RESERVE.—*The Administrator shall also—*

(A) at the end of each calendar year, transfer to the market stability reserve account each emission allowance that was offered for sale but not sold at any auction conducted under section 778; and

(B) transfer emission allowances established under subsection (g) from auction proceeds, and deposit them into the market stability reserve, to the extent necessary to maintain the reserve at its original size.

(c) MINIMUM MARKET STABILITY RESERVE AUCTION PRICE.—

(1) IN GENERAL.—*At each market stability reserve auction, the Administrator shall offer emission allowances for sale beginning at a minimum price per emission allowance, which shall be known as the 'minimum market stability reserve auction price'.*

(2) INITIAL MINIMUM MARKET STABILITY RESERVE AUCTION PRICES.—*The minimum market stability reserve auction price shall be $28 (in constant 2005 dollars) for the market stability reserve auctions held in 2012. For the market stability reserve auctions held in 2013 through 2017, the minimum market stability reserve auction price shall be the market stability reserve auction price for the previous year increased by 5 percent plus the rate of inflation (as measured by the Consumer Price Index for All Urban Consumers).*

(3) MINIMUM MARKET STABILITY RESERVE AUCTION PRICE IN SUBSEQUENT YEARS.—*For each market stability reserve auction held in 2018 and each year thereafter, the minimum market stability reserve auction price shall be the market stability reserve auction price for the previous year increased by 7 percent, plus the rate of inflation (as measured by the Consumer Price Index for All Urban Consumers).*

(d) QUANTITY OF EMISSION ALLOWANCES RELEASED FROM THE MARKET STABILITY RESERVE.—

(1) INITIAL LIMITS.—*Subject to paragraph (4), for each of calendar years 2012 through 2016, the annual limit on the number of emission allowances from the market stability reserve account that may be auctioned is an amount equal to 15 percent of the emission allowances established for that calendar year under section 721(a). This limit does not apply to offset credits sold on consignment pursuant to subsection (h).*

(2) LIMITS IN SUBSEQUENT YEARS.—*Subject to paragraph (4), for calendar year 2017 and each year thereafter, the annual limit on the number of emission allowances from the market stability reserve account that may be auctioned is an amount equal to 25 percent of the emission allowances established for that calendar year under section 721(a). This limit does not apply to offset credits sold on consignment pursuant to subsection (h).*

(3) ALLOCATION OF LIMITATION.—*One-fourth of each year's annual market stability reserve auction limit under this subsection shall be made available for auction in each quarter. Any allowances from the market stability reserve account that are made available for sale in a quarterly auction and not sold shall be rolled over and added to the quantity available for sale in the following quarter, except that allowances not sold at auction in the fourth quarter of a year shall not be rolled over to the following calendar year's auctions, but shall be returned to the market stability reserve account.*

(4) AUTHORITY TO ADJUST LIMITATION.—*The Administrator may adjust the limits in paragraphs (1) or (2) if the Administrator determines an adjustment is required to prevent disruptively high prices or to preserve the integrity of the market stability reserve.*

(e) PURCHASE LIMIT.—

(1) IN GENERAL.—*Except as provided in paragraph (2) or (3), the annual number of emission allowances that a covered entity may purchase at the market stability reserve auctions in each calendar year shall not exceed 20 percent of the covered entity's emissions during the most recent year for which allowances or credits were retired under section 722.*

(2) 2012 LIMIT.—*For calendar year 2012, the maximum aggregate number of emission allowances that a covered entity may purchase from that year's market stability reserve auctions shall be 20 percent of the covered entity's greenhouse gas emissions that the covered entity reported to the registry established under section 713 for 2011 and that would be subject to section 722(a) if occurring in later calendar years.*

(3) NEW ENTRANTS.—*The Administrator shall, by regulation, establish a separate purchase limit applicable to entities that expect to become a covered entity in the year of the auction, permitting them to purchase emission allowances at the market stability reserve auctions in their first calendar year of operation in an amount of at least 20 percent of their expected combined emissions and attributable greenhouse gas emissions for that year.*

(f) DELEGATION OR CONTRACT.—*Pursuant to regulations under this section, the Administrator may, by delegation or contract, provide for the conduct of market stability reserve auctions under the Administrator's supervision by other departments or agencies of the Federal Government or by nongovernmental agencies, groups, or organizations.*

(g) USE OF AUCTION PROCEEDS.—

(1) DEPOSIT IN MARKET STABILITY RESERVE FUND.—*The proceeds from market stability reserve auctions shall be placed in the Market Stability Reserve Fund established by subsection (j), and shall be available without further appropriation or fiscal year limitation for the purposes described in this subsection.*

(2) OFFSET CREDITS.—*The Administrator shall use the proceeds from each market stability reserve auction to purchase offset credits, including domestic offset credits and international offset credits issued pursuant to section 744. The Administrator shall retire those offset credits and establish a number of emission allowances equal to the number of international offset credits so retired. Emission allowances established under this paragraph shall be in addition to those established under section 721(a).*

(3) EMISSION ALLOWANCES.—*The Administrator shall deposit emission allowances established under paragraph (2) in the market stability reserve, except that, with respect to any such emission allowances in excess of the amount necessary to fill the market stability reserve to its original size, the Administrator shall—*

(A) except as provided in subparagraph (B), assign a vintage year to the emission allowance, which shall be no earlier than the year in which the allowance is established under paragraph (2) and shall treat such allowances as ones that are not designated for distribution or auction; and

(B) to the extent any such allowances cannot be assigned a vintage year because of the limitation in paragraph (4), retire the allowances.

(4) LIMITATION.—*In no case may the Administrator assign under paragraph (3)(A) more emission allowances to a vintage year than the number of emission allowances from that vintage year that were placed in the market stability reserve account under subsection (b)(1).*

(h) AVAILABILITY OF OFFSET CREDITS FOR AUCTION.—

(1) IN GENERAL.—*The regulations promulgated under section 721(h) shall allow any entity holding offset credits to request that the Administrator include such offset credits in an upcoming market stability reserve auction. The regulations shall provide that—*

(A) upon sale of such offset credits, the Administrator shall retire those offset credits, and establish and provide to the purchasers a number of emission allowances equal to the number of offset credits so retired, which allowances shall be in addition to those established under section 721(a); and

(B) for offset credits sold pursuant to this subsection, the proceeds for the entity that offered the offset credits for sale shall be the lesser of—

(i) the average daily closing price for offset credits sold on registered exchanges (or if such price is unavailable, the average price as determined by the Administrator) during the six months prior to the market stability reserve auction at which they were auctioned, with the remaining funds collected upon the sale of the offset credits deposited in the Treasury; and

(ii) the amount received for the offset credits at the auction.

(2) PROCEEDS.—*For offset credits sold pursuant to this subsection, notwithstanding section 3302 of title 31, United States Code, or any other provision of law, within 90 days of receipt, the United States shall transfer the proceeds from the auction, as defined in paragraph (1)(D), to the entity that offered the offset credits for sale. No funds transferred from a purchaser to a seller of offset credits under this paragraph shall be held by any officer or employee of the United States or treated for any purpose as public monies.*

(3) PRICING.—*When the Administrator acts under this subsection as the agent of an entity in possession of offset credits, the Administrator is not obligated to obtain the highest price possible for the offset credits, and instead shall auction such offset credits in the same manner and pursuant to the same rules (except as modified in paragraph (1)) as set forth for auctioning market stability reserve allowances. Entities requesting that such offset credits be offered for sale at a market stability reserve auction may not set a minimum reserve price for their offset credits that is different than the minimum market stability reserve auction price set pursuant to subsection (c).*

(i) INITIAL REGULATIONS.—*Not later than 24 months after the date of enactment of this title, the Administrator shall promulgate regulations, in consultation with other appropriate agencies, governing the auction of allowances under this section. Such regulations shall include the following requirements:*

(1) FREQUENCY; FIRST AUCTION.—*Auctions shall be held four times per year at regular intervals, with the first auction to be held no later than March 31, 2012.*

(2) AUCTION FORMAT.—*Auctions shall follow a single-round, sealed-bid, uniform price format.*

(3) PARTICIPATION; FINANCIAL ASSURANCE.—*Auctions shall be open to any covered entity eligible to purchase emission allowances at the auction under subsection (a)(2), except that the Administrator may establish financial assurance requirements to ensure that auction participants can and will perform on their bids.*

(4) DISCLOSURE OF BENEFICIAL OWNERSHIP.—*Each bidder in an auction shall be required to disclose the person or entity sponsoring or benefitting from the bidder's participation in the auction if such person or entity is, in whole or in part, other than the bidder.*

(5) PURCHASE LIMITS.—*No person may, directly or in concert with another participant, purchase more than 20 percent of the allowances offered for sale at any quarterly auction.*

(6) PUBLICATION OF INFORMATION.—*After the auction, the Administrator shall, in a timely fashion, publish the identities of winning bidders, the quantity of allowances obtained by each winning bidder, and the auction clearing price.*

(7) OTHER REQUIREMENTS.—*The Administrator may include in the regulations such other requirements or provisions as the Administrator, in consultation with other agencies as appropriate, considers appropriate to promote effective, efficient, transparent, and fair administration of auctions under this section.*

(j) MARKET STABILITY RESERVE FUND.—*There are established in the Treasury of the United States a fund to be known as the 'Market Stability Reserve Fund'.*

(k) REVISION OF REGULATIONS.—*The Administrator may, at any time, in consultation with other agencies as appropriate, revise the initial regulations promulgated under subsection (i). Such revised regulations need not meet the requirements identified in subsection (i) if the Administrator determines that an alternative auction design would be more effective, taking into account factors including costs of administration, transparency, fairness, and risks of collusion or manipulation. In determining whether and how to revise the initial regulations under this subsection, the Administrator shall not consider maximization of revenues to the Federal Government.*

SEC. 727. PERMITS.

(a) PERMIT PROGRAM.—*For stationary sources subject to title V of this Act, that are covered entities, the provisions of this title shall be implemented by permits issued to such covered entities (and enforced) in accordance with the provisions of title V, as modified by this title. Any such permit issued by the Administrator, or by a State with an approved permit program, shall require the owner or operator of a covered entity to hold emission allowances or offset credits at least equal to the total annual amount of carbon dioxide equivalents for its combined emissions and attributable greenhouse gas emissions to which section 722 applies. No such permit shall be issued that is inconsistent with the requirements of this title, and title V as applicable. Nothing in this section regarding compliance plans or in title V shall be construed as affecting allowances or offset credits. Submission of a statement by the owner or operator, or the designated representative of the owners and operators, of a covered entity that the owners and operators will hold emission allowances or offset credits for the entity's combined emissions and attributable greenhouse gas emissions to which section 722 applies shall be deemed to meet the proposed and approved planning requirements of title V. Recordation by the Administrator of transfers of emission allowances shall amend automatically all applicable proposed or approved permit applications, compliance plans, and permits.*

(b) MULTIPLE OWNERS.—*No permit shall be issued under this section and no allowances or offset credits shall be disbursed under this title to a covered entity or any other person until the designated representative of the owners or operators has filed a certificate of*

representation with regard to matters under this title, including the holding and distribution of emission allowances and the proceeds of transactions involving emission allowances. Where there are multiple holders of a legal or equitable title to, or a leasehold interest in, such a covered entity or other entity or where a utility or industrial customer purchases power under a long-term power purchase contract from an independent power production facility that is a covered entity, the certificate shall state—

(1) that emission allowances and the proceeds of transactions involving emission allowances will be deemed to be held or distributed in proportion to each holder's legal, equitable, leasehold, or contractual reservation or entitlement; or

(2) if such multiple holders have expressly provided for a different distribution of emission allowances by contract, that emission allowances and the proceeds of transactions involving emission allowances will be deemed to be held or distributed in accordance with the contract.

A passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the covered entity or other entity shall not be deemed to be a holder of a legal, equitable, leasehold, or contractual interest for the purpose of holding or distributing emission allowances as provided in this subsection, during either the term of such leasehold or thereafter, unless expressly provided for in the leasehold agreement. Except as otherwise provided in this subsection, where all legal or equitable title to or interest in a covered entity, or other entity, is held by a single person, the certificate shall state that all emission allowances received by the entity are deemed to be held for that person.

(c) PROHIBITION.—*It shall be unlawful for any person to operate any stationary source subject to the requirements of this section except in compliance with the terms and requirements of a permit issued by the Administrator or a State with an approved permit program in accordance with this section. For purposes of this subsection, compliance, as provided in section 504(f), with a permit issued under title V which complies with this title for covered entities shall be deemed compliance with this subsection as well as section 502(a).*

(d) RELIABILITY.—*Nothing in this section or title V shall be construed as requiring termination of operations of a stationary source that is a covered entity for failure to have an approved permit, or compliance plan, that is consistent with the requirements in the second and fifth sentences of subsection (a) concerning the holding of emission allowances, compensatory allowances, international emission allowances, or offset allowances, except that any such covered entity may be subject to the applicable enforcement provision of section 113.*

(e) REGULATIONS.—*The Administrator shall promulgate regulations to implement this section. To provide for permits required under this section, each State in which one or more stationary sources and that are covered entities are located shall submit, in accordance with this section and title V, revised permit programs for approval.*

SEC. 728. INTERNATIONAL EMISSION ALLOWANCES.

(a) QUALIFYING PROGRAMS.—*The Administrator, in consultation with the Secretary of State, may by rule designate an international climate change program as a qualifying international program if—*

(1) the program is run by a national or supranational foreign government, and imposes a mandatory absolute tonnage limit on greenhouse gas emissions from 1 or more foreign countries, or from 1 or more economic sectors in such a country or countries; and

(2) the program is at least as stringent as the program established by this title, including provisions to ensure at least comparable monitoring, compliance, enforcement, quality of offsets, and restrictions on the use of offsets.

(b) DISQUALIFIED ALLOWANCES.—*An international emission allowance may not be held under section 722(d)(3) if it is in the nature of an offset instrument or allowance awarded based on the achievement of greenhouse gas emission reductions or avoidance, or greenhouse gas sequestration, that are not subject to the mandatory absolute tonnage limits referred to in subsection (a)(1).*

(c) RETIREMENT.—

(1) ENTITY CERTIFICATION.—*The owner or operator of an entity that holds an international emission allowance under section 722(d)(3) shall certify to the Administrator that such international emission allowance has not previously been used to comply with any foreign, international, or domestic greenhouse gas regulatory program.*

(2) RETIREMENT.—

(A) FOREIGN AND INTERNATIONAL REGULATORY ENTITIES.—*The Administrator, in consultation with the Secretary of State, shall seek, by whatever means appropriate, including agreements and technical cooperation on allowance tracking, to ensure that any relevant foreign, international, and domestic regulatory entities—*

(i) are notified of the use, for purposes of compliance with this title, of any international emission allowance; and

(ii) provide for the disqualification of such international emission allowance for any subsequent use under the relevant foreign, international, or domestic greenhouse gas regulatory program, regardless of whether such use is a sale, exchange, or submission to satisfy a compliance obligation.

(B) DISQUALIFICATION FROM FURTHER USE.—*The Administrator shall ensure that, once an international emission allowance has been disqualified or otherwise used for purposes of compliance with this title, such allowance shall be disqualified from any further use under this title.*

(d) USE LIMITATIONS.—*The Administrator may, by rule, modify the percentage applicable to international emission allowances under section 722(d)(3), consistent with the purposes of the Clean Energy Jobs and American Power Act.*

PART D—OFFSETS

SEC. 731. OFFSETS INTEGRITY ADVISORY BOARD.

(a) ESTABLISHMENT.*—Not later than 30 days after the date of enactment of this title, the President shall establish an independent Offsets Integrity Advisory Board. The Advisory Board shall make recommendations to the President for use in promulgating and revising regulations under this part, and for ensuring the overall environmental integrity of the programs established pursuant to those regulations.*

(b) MEMBERSHIP.*—The Advisory Board shall be comprised of at least nine members. Each member shall be qualified by education, training, and experience to evaluate scientific and technical information on matters referred to the Board under this section. The President shall appoint Advisory Board members, including a chair and vice-chair of the Advisory Board. Terms shall be 3 years in length, except for initial terms, which may be up to 5 years in length to allow staggering. Members may be reappointed only once for an additional 3-year term, and such second term may follow directly after a first term.*

(c) ACTIVITIES.*—The Advisory Board established pursuant to subsection (a) shall—*

(1) provide recommendations, not later than 90 days after the Advisory Board's establishment and periodically thereafter, to the President regarding offset project types that should be considered for eligibility under section 733, taking into consideration relevant scientific and other issues, including—

(A) the availability of a representative data set for use in developing the activity baseline;

(B) the potential for accurate quantification of greenhouse gas reduction, avoidance, or sequestration for an offset project type;

(C) the potential level of scientific and measurement uncertainty associated with an offset project type;

(D) any beneficial or adverse environmental, public health, welfare, social, economic, or energy effects associated with an offset project type;

(E) the extent to which, as of the date of submission of the report, the project or activity types within each category—

(i) are required by law (including a regulation); or

(ii) represent business-as-usual (absent funding from offset credits) practices for a relevant land area, industry sector, or forest, soil or facility type;

(2) make available to the President its advice and comments on offset methodologies that should be considered under regulations promulgated pursuant to subsection (a) and (b) of section 734, including methodologies to address the issues of additionality, activity baselines, measurement, leakage, uncertainty, permanence, and environmental integrity;

(3) make available to the President, and other relevant Federal agencies, its advice and comments regarding scientific, technical, and methodological issues specific to the issuance of international offset credits under section 744;

(4) make available to the President, and other relevant Federal agencies, its advice and comments regarding scientific, technical, and methodological issues associated with the implementation of this part;

(5) make available to the President its advice and comments on areas in which further knowledge is required to appraise the adequacy of existing, revised, or proposed methodologies for use under this part, and describe the research efforts necessary to provide the required information; and

(6) make available to the President its advice and comments on other ways to improve or safeguard the environmental integrity of programs established under this part.

(d) SCIENTIFIC REVIEW OF OFFSET AND DEFORESTATION REDUCTION PROGRAMS.—*Not later than January 1, 2017, and at five-year intervals thereafter, the Advisory Board shall submit to the President and make available to the public an analysis of relevant scientific and technical information related to this part. The Advisory Board shall review approved and potential methodologies, scientific studies, offset project monitoring, offset project verification reports, and audits related to this part, and evaluate the net emissions effects of implemented offset projects. The Advisory Board shall recommend changes to offset methodologies, protocols, or project types, or to the overall offset program under this part, to ensure that offset credits issued by the President do not compromise the integrity of the annual emission reductions established under section 703, and to avoid or minimize adverse effects to human health or the environment.*

SEC. 732. ESTABLISHMENT OF OFFSETS PROGRAM.

(a) REGULATIONS.—*Not later than 2 years after the date of enactment of this title, the President, in consultation with appropriate Federal agencies and taking into consideration the recommendations of the Advisory Board, shall promulgate regulations establishing a program for the issuance of offset credits in accordance with the requirements of this part. The President shall periodically revise these regulations as necessary to meet the requirements of this part.*

(b) REQUIREMENTS.—*The regulations described in subsection (a) shall—*

(1) authorize the issuance of offset credits with respect to qualifying offset projects that result in reductions or avoidance of greenhouse gas emissions, or sequestration of greenhouse gases;

(2) ensure that such offset credits represent verifiable and additional greenhouse gas emission reductions or avoidance, or increases in sequestration;

(3) ensure that offset credits issued for sequestration offset projects are only issued for greenhouse gas reductions that are permanent;

(4) provide for the implementation of the requirements of this part;

(5) include as reductions in greenhouse gases reductions achieved through the destruction of methane and its conversion to carbon dioxide, and reductions achieved through destruction of chlorofluorocarbons or other ozone depleting substances, if

permitted by the President under section 619(b)(9) and subject to the conditions specified in section 619(b)(9), based on the carbon dioxide equivalent value of the substance destroyed; and

(6) establish a process to accept and respond to comments from third parties regarding programs established under this part in a timely manner.

(c) COORDINATION TO MINIMIZE NEGATIVE EFFECTS.—*In promulgating and implementing regulations under this part, the President shall act (including by rejecting projects, if necessary) to avoid or minimize, to the maximum extent practicable, adverse effects on human health or the environment resulting from the implementation of offset projects under this part.*

(d) OFFSET REGISTRY.—*The President shall establish within the allowance tracking system established under section 724(d) an Offset Registry for qualifying offset projects and offset credits issued with respect thereto under this part.*

(e) LEGAL STATUS OF OFFSET CREDIT.—*An offset credit does not constitute a property right.*

(f) FEES.—*The President shall assess fees payable by offset project developers in an amount necessary to cover the administrative costs and the enforcement costs to the Environmental Protection Agency and the Department of Justice of carrying out the activities under this part. Amounts collected for such fees shall be available to the President and the Attorney General for carrying out the activities under this part to the extent provided in advance in appropriations Acts.*

(g) SECRETARY OF AGRICULTURE.—*The President shall designate the Secretary of Agriculture to serve as the lead agency in—*

(1) the implementation of elements of the offset program, in coordination with the Administrator, for agriculture and forestry projects in the United States authorized under this part, including project types and methodologies; and

(2) working directly with farmers, ranchers, and foresters to implement agriculture and forestry projects.

SEC. 733. ELIGIBLE PROJECT TYPES.

(a) LIST OF ELIGIBLE PROJECT TYPES.—

(1) IN GENERAL.—*As part of the regulations promulgated under section 732(a), the President shall establish, and may periodically revise, a list of types of projects eligible to generate offset credits, including international offset credits, under this part.*

(2) ADVISORY BOARD RECOMMENDATIONS.—*In determining the eligibility of project types, the President shall take into consideration the recommendations of the Advisory Board. If a list established under this section differs from the recommendations of the Advisory Board, the regulations promulgated under section 732(a) shall include a justification for the discrepancy.*

(3) INITIAL DETERMINATION.—*The President shall establish the initial eligibility list under paragraph (1) not later than one year after the date of enactment of this title for which there are well developed methodologies that the President determines would meet the criteria of section 734.*

(4) PROJECT TYPES TO BE CONSIDERED FOR INITIAL LIST.—*In determining the initial list, the President shall give priority to*

consideration of offset project types that are recommended by the Advisory Board, and shall consider—

(A) methane collection and combustion projects at active coal mines;

(B) methane collection and combustion projects at landfills;

(C) capture of venting, flaring, and fugitive emissions from oil and natural gas systems;

(D) nonlandfill methane collection, combustion and avoidance projects involving organic waste streams that would have otherwise emitted methane in the atmosphere, including manure management and biogas capture and combustion;

(E) projects involving afforestation or reforestation of acreage not forested as of January 1, 2009;

(F) forest management resulting in an increase in forest carbon stores, including harvested wood products;

(G) agricultural, grassland, and rangeland sequestration and management practices, including—

(i) altered tillage practices, including avoided abandonment of such practices;

(ii) winter cover cropping, continuous cropping, and other means to increase biomass returned to soil in lieu of planting followed by fallowing;

(iii) reduction of nitrogen fertilizer use or increase in nitrogen use efficiency;

(iv) reduction in the frequency and duration of flooding of rice paddies;

(v) reduction in carbon emissions from organic soils;

(vi) reduction in greenhouse gas emissions from manure and effluent;

(vii) reduction in greenhouse gas emissions due to changes in animal management practices, including dietary modifications;

(viii) planting and cultivation of permanent tree crops;

(ix) greenhouse gas emission reductions from improvements and upgrades to mobile or stationary equipment (including engines);

(x) practices to reduce and eliminate soil tillage;

(xi) reductions in greenhouse gas emissions through restoration of wetlands, forestland, and grassland; and

(xii) sequestration of greenhouse gases through management of tree crops; and

(H) changes in carbon stocks attributed to land use change and forestry activities, including—

(i) management of peatland or wetland;

(ii) conservation of grassland and forested land;

(iii) improved forest management, including accounting for carbon stored in wood products;

(iv) reduced deforestation or avoided forest conversion;

(v) urban tree-planting and maintenance;

(vi) agroforestry; and

(vii) adaptation of plant traits or new technologies that increase sequestration by forests.

(5) METHODOLOGIES.*—In issuing methodologies pursuant to section 734, the President shall give priority to methodologies for offset types included on the initial eligibility list.*

(b) MODIFICATION OF LIST.*—The President—*

(1) shall add additional project types to the list not later than 2 years after the date of enactment of this title;

(2) may at any time, by rule, add a project type to the list established under subsection (a) if the President, in consultation with appropriate Federal agencies and taking into consideration the recommendations of the Advisory Board, determines that the project type can generate additional reductions or avoidance of greenhouse gas emissions, or sequestration of greenhouse gases, subject to the requirements of this part;

(3) may at any time, by rule, determine that a project type on the list does not meet the requirements of this part, and remove a project type from the list established under subsection (a), in consultation with appropriate Federal agencies and taking into consideration any recommendations of the Advisory Board; and

(4) shall consider adding to or removing from the list established under subsection (a), at a minimum, project types proposed to the President—

(A) by petition pursuant to subsection (c); or

(B) by the Advisory Board.

(c) PETITION PROCESS.*—Any person may petition the President to modify the list established under subsection (a) by adding or removing a project type pursuant to subsection (b). Any such petition shall include a showing by the petitioner that there is adequate data to establish that the project type does or does not meet the requirements of this part. Not later than 12 months after receipt of such a petition, the President shall either grant or deny the petition and publish a written explanation of the reasons for the President's decision. The President may not deny a petition under this subsection on the basis of inadequate agency resources or time for review.*

SEC. 734. REQUIREMENTS FOR OFFSET PROJECTS.

(a) METHODOLOGIES.*—As part of the regulations promulgated under section 732(a), the President shall establish, for each type of offset project listed as eligible under section 733, the following:*

(1) ADDITIONALITY.*—A standardized methodology for determining the additionality of greenhouse gas emission reductions or avoidance, or greenhouse gas sequestration, achieved by an offset project of that type. Such methodology shall ensure, at a minimum, that any greenhouse gas emission reduction or avoidance, or any greenhouse gas sequestration, is considered additional only to the extent that it results from activities that—*

(A) are not required by or undertaken to comply with any law, including any regulation or consent order;

(B) were not commenced prior to January 1, 2009, except in the case of—

(i) offset project activities that commenced after January 1, 2001, and were registered as of the date of enactment of this title under an offset program with re-

spect to which the President has made an affirmative determination under section 740(a)(2); or

(ii) activities that are readily reversible, with respect to which the President may set an alternative earlier date under this subparagraph that is not earlier than January 1, 2001, where the President determines that setting such an alternative date may produce an environmental benefit by removing an incentive to cease and then reinitiate activities that began prior to January 1, 2009;

(C) are not receiving support under section 323 of division A, or section 206 of division B, of the Clean Energy Jobs and American Power Act; and

(D) exceed the activity baseline established under paragraph (2).

(2) ACTIVITY BASELINES.—*A standardized methodology for establishing activity baselines for offset projects of that type. The President shall set activity baselines to reflect a conservative estimate of business-as-usual performance or practices for the relevant type of activity such that the baseline provides an adequate margin of safety to ensure the environmental integrity of offsets calculated in reference to such baseline.*

(3) QUANTIFICATION METHODS.—*A standardized methodology for determining the extent to which greenhouse gas emission reductions or avoidance, or greenhouse gas sequestration, achieved by an offset project of that type exceed a relevant activity baseline, including protocols for monitoring and accounting for uncertainty.*

(4) LEAKAGE.—*A standardized methodology for accounting for and mitigating potential leakage, if any, from an offset project of that type, taking uncertainty into account.*

(b) ACCOUNTING FOR REVERSALS.—

(1) ACCOUNTING.—

(A) IN GENERAL.—*After issuance of offset credits for a project, pursuant to section 733, the offset project developer shall, in a timely manner, report any reversal that occurs.*

(B) INTENTIONAL REVERSALS.—*An offset project developer shall not engage in repeated intentional reversals.*

(2) REGULATIONS.—*As part of the regulations promulgated under section 732(a), for each type of sequestration project listed under section 733, the President shall establish requirements to account for and address reversals, including—*

(A) a requirement to report any reversal with respect to an offset project for which offset credits have been issued under this part;

(B) provisions to require emission allowances to be held in amounts to fully compensate for greenhouse gas emissions attributable to reversals, and to assign responsibility for holding such emission allowances;

(C) provisions to discourage repeated intentional reversals by offset project developers, including but not limited to the assessment of administrative fees, temporary suspension, or disqualification of an offset project developer from the program; and

(D) any other provisions the President determines necessary to account for and address reversals.

(3) MECHANISMS.—*The President shall prescribe mechanisms to ensure that any sequestration with respect to which an offset credit is issued under this part results in a permanent net increase in sequestration, and that full account is taken of any actual or potential reversal of such sequestration, with an adequate margin of safety. The President shall prescribe at least one of the following mechanisms to meet the requirements of this paragraph:*

(A) An offsets reserve, pursuant to paragraph (4).

(B) Insurance that provides for purchase and provision to the President for retirement of an amount of offset credits or emission allowances equal in number to the tons of carbon dioxide equivalents of greenhouse gas emissions released due to reversal.

(C) Another mechanism that the President determines satisfies the requirements of this part.

(4) OFFSETS RESERVE.—

(A) IN GENERAL.—*An offsets reserve referred to in paragraph (3)(A) is a program under which, before issuance of offset credits under this part, the President shall subtract and reserve from the quantity to be issued a quantity of offset credits based on the risk of reversal. The President shall—*

(i) hold these reserved offset credits in the offsets reserve; and

(ii) register the holding of the reserved offset credits in the Offset Registry established under section 732(d).

(B) PROJECT REVERSAL.—

(i) IN GENERAL.—*If a reversal has occurred with respect an offset project for which offset credits are reserved under this paragraph, the President shall remove offset credits or emission allowances from the offsets reserve and cancel them to fully account for the tons of carbon dioxide equivalent that are no longer sequestered.*

(ii) INTENTIONAL REVERSALS.—*If the President determines that a reversal was intentional, the offset project developer for the relevant offset project shall place into the offsets reserve a quantity of offset credits, or combination of offset credits and emission allowances, equal in number to the number of reserve offset credits that were canceled due to the reversal pursuant to clause (i).*

(iii) UNINTENTIONAL REVERSALS.—*If the President determines that a reversal was unintentional, the offset project developer for the relevant offset project shall place into the offsets reserve a quantity of offset credits, or combination of offset credits and emission allowances, equal in number to half the number of offset credits that were reserved for that offset project, or half the number of reserve offset credits that were canceled*

due to the reversal pursuant to clause (i), whichever is less.

(iv) PETITION.—*Any person may petition the President for a determination that an offsets reversal has occurred. Any such petition shall include a showing by the petitioner that there is adequate data or other evidence to support the petition. Not later than 90 days after the date of receipt of the petition, the President shall take final action determining either that the reversal has occurred or that the reversal has not occurred. Such determination shall be accompanied by a statement of the basis for the determination.*

(C) USE OF RESERVED OFFSET CREDITS.—*Offset credits placed into the offsets reserve under this paragraph may not be used to comply with section 722.*

(5) TERM OFFSET CREDITS.—

(A) APPLICABILITY.—*With respect to a practice listed under section 733 that sequesters greenhouse gases and has a crediting period of not more than 5 years, the President may address reversals pursuant to this paragraph in lieu of permanently accounting for reversals pursuant to paragraphs (2) and (3).*

(B) ACCOUNTING FOR REVERSALS.—*For such practices or projects implementing the practices described in subparagraph (A), the President shall require only reversals that occur during the crediting period to be accounted for and addressed pursuant to paragraphs (2) and (3).*

(C) CREDITS ISSUED.—*For practices or projects regulated pursuant to subparagraph (B), the President shall issue under section 737 a term offset credit, in lieu of an offset credit, for each ton of carbon dioxide equivalent that has been sequestered.*

(c) CREDITING PERIODS.—

(1) IN GENERAL.—*As part of the regulations promulgated under section 732(a), for each offset project type, the President shall specify a crediting period, and establish provisions for petitions for new crediting periods, in accordance with this subsection.*

(2) DURATION.—

(A) IN GENERAL.—*The crediting period shall be not less than 5 and not greater than 10 years for any project type other than those involving sequestration or term offsets.*

(B) FORESTRY PROJECTS.—*The crediting period for a forestry offset project shall not exceed 20 years.*

(C) TERM OFFSET CREDITS.—*The crediting period for a term offset credit issued shall not exceed 5 years.*

(3) ELIGIBILITY.—*An offset project shall be eligible to generate offset credits under this part only during the project's crediting period. During such crediting period, the project shall remain eligible to generate offset credits, subject to the methodologies and project type eligibility list that applied as of the date of project approval under section 735, except as provided in paragraph (4).*

(4) PETITION FOR NEW CREDITING PERIOD.—*An offset project developer may petition for a new crediting period to commence after termination of a crediting period, subject to the methodologies and project type eligibility list in effect at the time when such petition is submitted. A petition may not be submitted under this paragraph more than 18 months before the end of the pending crediting period. The President may grant such petition after public notice and opportunity for comment. The President may limit the number of new crediting periods available for projects of particular project types.*

(d) ENVIRONMENTAL INTEGRITY.—*In establishing the requirements under this section, the President shall apply conservative assumptions or methods to maximize the certainty that the environmental integrity of the greenhouse gas limitations established under section 703 is not compromised.*

(e) PRE-EXISTING METHODOLOGIES.—*In promulgating requirements under this section, the President shall give due consideration to methodologies for offset projects existing as of the date of enactment of this title.*

(f) ADDED PROJECT TYPES.—*The President shall establish methodologies described in subsection (a), and, as applicable, requirements and mechanisms for reversals as described in subsection (b), for any project type that is added to the list pursuant to section 733.*

SEC. 735. APPROVAL OF OFFSET PROJECTS.

(a) APPROVAL PETITION.—*An offset project developer shall submit an offset project approval petition signed by a responsible official (who shall certify the accuracy of the information submitted) and providing such information as the President requires to determine whether the offset project is eligible for issuance of offset credits under rules promulgated pursuant to this part.*

(b) TIMING.—*An approval petition shall be submitted to the President under subsection (a) not later than the time at which an offset project's first verification report is submitted under section 736.*

(c) APPROVAL PETITION REQUIREMENTS.—*As part of the regulations promulgated under section 732, the President shall include provisions for, and shall specify, the required components of an offset project approval petition required under subsection (a), which shall include—*

(1) designation of an offset project developer;

(2) designation of a party who is authorized to provide access to the appropriate officials or an authorized representative to the offset project; and

(3) any other information that the President considers to be necessary to achieve the purposes of this part.

(d) APPROVAL AND NOTIFICATION.—*Not later than 90 days after receiving a complete approval petition under subsection (a), the President shall make the approval petition publicly available on the internet, approve or deny the petition in writing, and, if the petition is denied, provide the reasons for the denial and make the President's decision publicly available on the internet. After an offset project is approved, the offset project developer shall not be required to resubmit an approval petition during the offset project's crediting period, except as provided in section 734(c)(4).*

(e) APPEAL.—*The President shall establish procedures for appeal and review of determinations made under subsection (d).*

(f) VOLUNTARY PREAPPROVAL REVIEW.—*The President may establish a voluntary preapproval review procedure, to allow an offset project developer to request the President to conduct a preliminary eligibility review for an offset project. Findings of such reviews shall not be binding upon the President. The voluntary preapproval review procedure—*

(1) shall require the offset project developer to submit such basic project information as the President requires to provide a meaningful review; and

(2) shall require a response from the President not later than 6 weeks after receiving a request for review under this subsection.

SEC. 736. VERIFICATION OF OFFSET PROJECTS.

(a) IN GENERAL.—*As part of the regulations promulgated under section 732(a), the President shall establish requirements, including protocols, for verification of the quantity of greenhouse gas emission reductions or avoidance, or sequestration of greenhouse gases, resulting from an offset project. The regulations shall require that an offset project developer shall submit a report, prepared by a third-party verifier accredited under subsection (d), providing such information as the President requires to determine the quantity of greenhouse gas emission reductions or avoidance, or sequestration of greenhouse gas, resulting from the offset project.*

(b) SCHEDULE.—*The President shall prescribe a schedule for the submission of verification reports under subsection (a).*

(c) VERIFICATION REPORT REQUIREMENTS.—*The President shall specify the required components of a verification report required under subsection (a), which shall include—*

(1) the name and contact information for a designated representative for the offset project developer;

(2) the quantity of greenhouse gas reduced, avoided, or sequestered;

(3) the methodologies applicable to the project pursuant to section 734;

(4) a certification that the project meets the applicable requirements;

(5) a certification establishing that the conflict of interest requirements in the regulations promulgated under subsection (d)(1) have been complied with; and

(6) any other information that the President considers to be necessary to achieve the purposes of this part.

(d) VERIFIER ACCREDITATION.—

(1) IN GENERAL.—*As part of the regulations promulgated under section 732(a), the President shall establish a process and requirements for periodic accreditation of third-party verifiers to ensure that such verifiers are professionally qualified and have no conflicts of interest with offset project developers.*

(2) STANDARDS.—

(A) AMERICAN NATIONAL STANDARDS INSTITUTE ACCREDITATION.—*The President may accredit, or accept for purposes of accreditation under this subsection, verifiers ac-*

credited under the American National Standards Institute (ANSI) accreditation program in accordance with ISO 14065. The President shall accredit, or accept for accreditation, verifiers under this subparagraph only if the President finds that the American National Standards Institute accreditation program provides sufficient assurance that the requirements of this part will be met.

(B) EPA ACCREDITATION.—*As part of the regulations promulgated under section 732(a), the President may establish accreditation standards for verifiers under this subsection, and may establish related training and testing programs and requirements.*

(3) PUBLIC ACCESSIBILITY.—*Each verifier meeting the requirements for accreditation in accordance with this subsection shall be listed in a publicly accessible database, which shall be maintained and updated by the President.*

(4) REVOCATION.—*The regulations concerning accreditation of third-party verifiers required under paragraph (1) shall establish a process for the President to revoke the accreditation of any third-party verifier that the President finds fails to maintain professional qualifications or to avoid a conflict of interest, or for other good cause.*

SEC. 737. ISSUANCE OF OFFSET CREDITS.

(a) DETERMINATION AND NOTIFICATION.—*Not later than 90 days after receiving a complete verification report under section 736, the President shall—*

(1) make the report publicly available on the Internet;

(2) make a determination of the quantity of greenhouse gas emissions reduced or avoided, or greenhouse gases sequestered, resulting from an offset project approved under section 735; and

(3) notify the offset project developer in writing of such determination and make such determination publicly available on the Internet.

(b) ISSUANCE OF OFFSET CREDITS.—*The President shall issue one offset credit to an offset project developer for each ton of carbon dioxide equivalent that the President has determined has been reduced, avoided, or sequestered during the period covered by a verification report submitted in accordance with section 736, only if—*

(1) the President has approved the offset project pursuant to section 735; and

(2) the relevant emissions reduction, avoidance, or sequestration has—

(A) already occurred, during the offset project's crediting period; and

(B) occurred after January 1, 2009.

(c) APPEAL.—*The President shall establish procedures for appeal and review of determinations made under subsection (a).*

(d) TIMING.—*Offset credits meeting the criteria established in subsection (b) shall be issued not later than 2 weeks following the verification determination made by the President under subsection (a).*

(e) REGISTRATION.—*The President shall assign a unique serial number to and register each offset credit to be issued in the Offset Registry established under section 732(d).*

SEC. 738. AUDITS.

(a) IN GENERAL.—*The President shall, on an ongoing basis, conduct random audits of offset projects and offset credits. The President shall conduct audits of the practices of third-party verifiers. In each year, the President shall conduct audits, at minimum, for a representative sample of project types and geographic areas.*

(b) DELEGATION.—*The President may delegate to a State or Indian tribe the responsibility for conducting audits under this section if the President finds that the program proposed by the State or Indian tribe provides assurances equivalent to those provided by the auditing program of the President, and that the integrity of the offset program under this part will be maintained. Nothing in this subsection shall prevent the President from conducting any audit the President considers necessary and appropriate.*

(c) AUDIT REQUIREMENTS.—*As part of the regulations promulgated under section 732(a), the President shall establish requirements and protocols for an auditing program, whether undertaken by the President or an authorized representative, concerning project developers, third party verifiers, and reports submitted by those persons, including the offset project approval petition and verification report. Such regulations shall include—*

(1) the components of the offset project, which shall be evaluated against the offset approval petition and the verification report;

(2) the minimum experience or training of the auditors;

(3) the form in which reports shall be completed;

(4) requirements for delegating auditing functions to States or Indian tribes, including requiring periodic reports from States or Indian tribes on their auditing activities and findings; and

(5) any other information that the appropriate officials considers to be necessary to achieve the purpose of the Act.

SEC. 739. PROGRAM REVIEW AND REVISION.

At least once every 5 years, the President shall review and, based on new or updated information and taking into consideration the recommendations of the Advisory Board, update and revise—

(1) the list of eligible project types established under section 733;

(2) the methodologies established, including specific activity baselines, under section 734(a);

(3) the reversal requirements and mechanisms established or prescribed under section 734(b);

(4) measures to improve the accountability of the offsets program; and

(5) any other requirements established under this part to ensure the environmental integrity and effective operation of this part.

SEC. 740. EARLY OFFSET SUPPLY.

(a) PROJECTS REGISTERED UNDER OTHER GOVERNMENT-RECOGNIZED PROGRAMS.—*Except as provided in subsection (b) or (c), after public notice and opportunity for comment, the President shall issue*

one offset credit for each ton of carbon dioxide equivalent emissions reduced, avoided, or sequestered—

(1) under an offset project that was started after January 1, 2001;

(2) for which a credit was issued under any regulatory or voluntary greenhouse gas emission offset program that the President determines—

(A) was established under State or tribal law or regulation prior to January 1, 2009, or has been approved by the President pursuant to subsection (e);

(B) has developed offset project type standards, methodologies, and protocols through a public consultation process or a peer review process;

(C) has made available to the public standards, methodologies, and protocols that require that credited emission reductions, avoidance, or sequestration are permanent, additional, verifiable, and enforceable;

(D) requires that all emission reductions, avoidance, or sequestration be verified by a State regulatory agency or an accredited third-party independent verification body;

(E) requires that all credits issued are registered in a publicly accessible registry, with individual serial numbers assigned for each ton of carbon dioxide equivalent emission reductions, avoidance, or sequestration; and

(F) ensures that no credits are issued for activities for which the entity administering the program, or a program administrator or representative, has funded, solicited, or served as a fund administrator for the development of, the project or activity that caused the emission reduction, avoidance, or sequestration; and

(3) for which the credit described in paragraph (2) is transferred to the President.

(b) INELIGIBLE CREDITS.*—Subsection (a) shall not apply to offset credits that have expired or have been retired, canceled, or used for compliance under a program established under State or tribal law or regulation.*

(c) LIMITATION.*—Notwithstanding subsection (a)(1), offset credits shall be issued under this section—*

(1) only for reductions or avoidance of greenhouse gas emissions, sequestration of greenhouse gases, or destruction of chlorofluorocarbons (subject to the conditions specified in section 619(b)(9) and based on the carbon dioxide equivalent value of the substance destroyed), that occur after January 1, 2009; and

(2) only until the date that is 3 years after the date of enactment of this title, or the date that regulations promulgated under section 732(a) take effect, whichever occurs sooner.

(d) RETIREMENT OF CREDITS.*—The President shall seek to ensure that offset credits described in subsection (a)(2) are retired for purposes of use under a program described in subsection (b).*

(e) OTHER PROGRAMS.*—*

(1) IN GENERAL.*—Offset programs that either—*

(A) were not established under State or tribal law; or

(B) were not established prior to January 1, 2009;

but that otherwise meet all of the criteria of subsection (a)(2) may apply to the President to be approved under this subsection as an eligible program for early offset credits under this section.

(2) APPROVAL.—*The President shall approve any such program that the President determines has criteria and methodologies of at least equal stringency to the criteria and methodologies of the programs established under State or tribal law that the President determines meet the criteria of subsection (a)(2). The President shall approve types of offsets under any such program that are subject to criteria and methodologies of at least equal stringency to the criteria and methodologies for such types of offsets applied under the programs established under State or tribal law that the President determines meet the criteria of subsection (a)(2). The President shall make a determination on any application received under this subsection by not later than 180 days from the date of receipt of the application.*

SEC. 741. ENVIRONMENTAL CONSIDERATIONS.

If the President lists forestry or other relevant land management-related offset projects as eligible offset project types under section 733, the President, in consultation with appropriate Federal agencies, shall promulgate regulations to establish criteria for such offset projects—

(1) to ensure that native species are given primary consideration in such projects;

(2) to enhance biological diversity in such projects;

(3) to prohibit the use of federally designated or State-designated noxious weeds;

(4) to prohibit the use of a species listed by a regional, State, or tribal invasive plant authority within the applicable region, State, or land of Indian tribes;

(5) in the case of forestry offset projects, in accordance with widely accepted, environmentally sustainable forestry practices;

(6) to ensure that the offset project area was not converted from native ecosystems, such as a forest, grassland, scrubland or wetland, to generate offsets, unless such conversation took place at least 10 years prior to the date of enactment of this title or before January 1, 2009, whichever date is earlier; and

(7) to the maximum extent practicable, ensure that the use of offset credits would be eligible to satisfy emission reduction commitments made by the United States in multilateral agreements, such as the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992 (or any successor agreement).

SEC. 742. TRADING.

Section 724 shall apply to the trading of offset credits.

SEC. 743. OFFICE OF OFFSETS INTEGRITY.

(a) ESTABLISHMENT.—*There is established within the Office of the Assistant Attorney General of the Environment and Natural Resources Division in the Department of Justice a Carbon Offsets Integrity Unit, to be headed by a Special Counsel (hereinafter referred to as the 'Special Counsel'). The Carbon Offsets Integrity Unit and*

the Special Counsel shall be responsible to and shall report directly to the Assistant Attorney General of the Environment and Natural Resources Division.

(b) APPOINTMENT.—*The Special Counsel shall be appointed by the President, by and with the advice and consent of the Senate.*

(c) RESPONSIBILITIES.—*The Special Counsel shall—*

(1) supervise and coordinate investigations and civil enforcement within the Department of Justice of the carbon offsets program under this part;

(2) ensure that Federal law relating to civil enforcement of the carbon offsets program is used to the fullest extent authorized; and

(3) ensure that adequate resources are made available for the investigation and enforcement of civil violations of the carbon offsets program.

(d) COMPENSATION.—*The Special Counsel shall be paid at the basic pay payable for level V of the Executive Schedule under section 5316 of title 5, United States Code.*

(e) ASSIGNMENT OF PERSONNEL.—*There shall be assigned to the Carbon Offsets Integrity Unit such personnel as the Attorney General determines to be necessary to provide an appropriate level of enforcement activity in the area of carbon offsets.*

SEC. 744. INTERNATIONAL OFFSET CREDITS.

(a) IN GENERAL.—*The Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, may issue, in accordance with this section, international offset credits based on activities that reduce or avoid greenhouse gas emissions, or increase sequestration of greenhouse gases, in a developing country. Such credits may be issued for projects pursuant to the requirements of this part or as provided in subsection (c), (d), or (e).*

(b) ISSUANCE.—

(1) REGULATIONS.—*Not later than 2 years after the date of enactment of this title, the Administrator, in consultation with the Secretary of State, the Administrator of the United States Agency for International Development, and any other appropriate Federal agency, and taking into consideration the recommendations of the Advisory Board, shall promulgate regulations for implementing this section, taking into consideration specific factors relevant to the determination of eligible international offset project types and the implementation of international methodologies for each offset type approved. Except as otherwise provided in this section, the issuance of international offset credits under this section shall be subject to the requirements of this part.*

(2) REQUIREMENTS FOR INTERNATIONAL OFFSET CREDITS.—*The Administrator may issue international offset credits only if—*

(A) the United States is a party to a bilateral or multilateral agreement or arrangement that includes the country in which the project or measure achieving the relevant greenhouse gas emission reduction or avoidance, or greenhouse gas sequestration, has occurred;

(B) such country is a developing country; and

(C) such agreement or arrangement—

(i) ensures that all of the requirements of this part apply to the issuance of international offset credits under this section;

(ii) provides for the appropriate distribution of international offset credits issued; and

(iii) provides that the offset project developer be eligible to receive service of process in the United States for the purpose of all civil and regulatory actions in Federal courts, if such service is made in accordance with the Federal rules for service of process in the States in which the case or regulatory action is brought.

(3) SUPPLEMENTAL INTERNATIONAL OFFSET CATEGORIES.—

(A) IN GENERAL.—*In order to ensure a sufficient supply of international offsets and to reduce the cost of compliance with this title, the Administrator may establish categories of international offsets in addition to those described in subsections (c), (d), and (e), if—*

(i) for 2 consecutive years, the auction price for allowances reaches the market stability reserve auction price under section 726(c); and

(ii) the Administrator determines that the total amount of international offsets held by covered entities for each of the 2 years referred to in clause (i) does not exceed the limit on international offsets established under section 722(d)(1)(B)(iii).

(B) SUPPLEMENTAL CATEGORIES.—

(i) IN GENERAL.—*Any supplemental categories of international offsets established pursuant to subparagraph (A) shall—*

(I) satisfy all applicable provisions of this part, including subsection (b)(2) of this section and sections 733 and 734; and

(II) meet the criteria described in clause (ii).

(ii) CRITERIA.—*The criteria referred to in clause (i)(II) are that—*

(I) the country in which the activities in the offset category would take place has developed and is implementing a low carbon development plan that includes provisions for the activities described in the offset category;

(II) the activities in the offset category are not activities included under subsection (c), (d) or (e); and

(III) the activities in the offset category satisfy specific criteria relevant to methodologies and institutional and technical capacities associated with developing country contexts to ensure adequate treatment of leakage, additionality, and permanence.

(c) SECTOR-BASED CREDITS.—

(1) IN GENERAL.—*In order to minimize the potential for leakage and to encourage countries to take nationally appropriate mitigation actions to reduce or avoid greenhouse gas emissions,*

or sequester greenhouse gases, the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, shall—

(A) identify sectors, or combinations of sectors, within specific countries with respect to which the issuance of international offset credits on a sectoral basis is appropriate; and

(B) issue international offset credits for such sectors only on a sectoral basis.

(2) IDENTIFICATION OF SECTORS.—

(A) GENERAL RULE.—*For purposes of paragraph (1)(A), a sectoral basis shall be appropriate for activities—*

(i) in countries that have comparatively high greenhouse gas emissions, or comparatively greater levels of economic development; and

(ii) that, if located in the United States, would be within a sector subject to the compliance obligation under section 722.

(B) FACTORS.—*In determining the sectors and countries for which international offset credits should be awarded only on a sectoral basis, the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, shall consider the following factors:*

(i) The country's gross domestic product.

(ii) The country's total greenhouse gas emissions.

(iii) Whether the comparable sector of the United States economy is covered by the compliance obligation under section 722.

(iv) The heterogeneity or homogeneity of sources within the relevant sector.

(v) Whether the relevant sector provides products or services that are sold in internationally competitive markets.

(vi) The risk of leakage if international offset credits were issued on a project-level basis, instead of on a sectoral basis, for activities within the relevant sector.

(vii) The capability of accurately measuring, monitoring, reporting, and verifying the performance of sources across the relevant sector.

(viii) Such other factors as the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, determines are appropriate to—

(I) ensure the integrity of the United States greenhouse gas emissions limitations established under section 703; and

(II) encourage countries to take nationally appropriate mitigation actions to reduce or avoid greenhouse gas emissions, or sequester greenhouse gases.

(ix) The issuance of offsets for activities that are—

(I) in addition to nationally appropriate mitigation actions taken by developing countries pursu-

ant to the low-carbon development plans of the countries; and

(II) on a sectoral basis.

(3) SECTORAL BASIS.—

(A) DEFINITION.—*In this subsection, the term 'sectoral basis' means the issuance of international offset credits only for the quantity of sector-wide reductions or avoidance of greenhouse gas emissions, or sector-wide increases in sequestration of greenhouse gases, achieved across the relevant sector or sectors of the economy relative to a baseline level of emissions established in an agreement or arrangement described in subsection (b)(2)(A) for the sector.*

(B) BASELINE.—*The baseline for a sector shall—*

(i) be established at levels of greenhouse gas emissions lower than would occur under a business-as-usual scenario, taking into account relevant domestic or international policies or incentives to reduce greenhouse gas emissions;

(ii) be used to determine additionality and performance;

(iii) account for all significant sources of emissions from a sector;

(iv) be adjusted over time to reflect changing circumstances;

(v) be developed taking into consideration such factors as—

(I) any established emissions performance level for the sector;

(II) the current performance of the sector in the country;

(III) expected future trends of the sector in the country; and

(IV) historical data and other factors to ensure additionality; and

(vi) be designed to produce significant deviations from business-as-usual emissions, consistent with nationally appropriate mitigation commitments or actions, in a way that equitably contributes to meeting thresholds identified in section 705(e)(2).

(d) CREDITS ISSUED BY AN INTERNATIONAL BODY.—

(1) IN GENERAL.—*The Administrator, in consultation with the Secretary of State, may issue international offset credits in exchange for instruments in the nature of offset credits that are issued by an international body established pursuant to the United Nations Framework Convention on Climate Change, to a protocol to such Convention, or to a treaty that succeeds such Convention. The Administrator may issue international offset credits under this subsection only if, in addition to the requirements of subsection (b), the Administrator has determined that the international body that issued the instruments has implemented substantive and procedural requirements for the relevant project type that provide equal or greater assurance of the integrity of such instruments as is provided by the requirements of this part. Beginning on January 1, 2016, the Administrator*

shall issue no offset credit pursuant to this subsection if the activity generating the greenhouse gas emission reductions or avoidance, or greenhouse gas sequestration, occurs in a country and sector identified by the Administrator under subsection (c), unless the offset credit issued by the international body is consistent with section 744(c).

(2) RETIREMENT.—*The Administrator, in consultation with the Secretary of State, shall seek, by whatever means appropriate, including agreements, arrangements, or technical cooperation with the international issuing body described in paragraph (1), to ensure that such body—*

(A) is notified of the Administrator's issuance, under this subsection, of an international offset credit in exchange for an instrument issued by such international body; and

(B) provides, to the extent feasible, for the disqualification of the instrument issued by such international body for subsequent use under any relevant foreign or international greenhouse gas regulatory program, regardless of whether such use is a sale, exchange, or submission to satisfy a compliance obligation.

(e) OFFSETS FROM REDUCED DEFORESTATION.—

(1) REQUIREMENTS.—*The Administrator, in accordance with the regulations promulgated under subsection (b)(1) and an agreement or arrangement described in subsection (b)(2)(A), shall issue international offset credits for greenhouse gas emission reductions achieved through activities to reduce deforestation only if, in addition to the requirements of subsection (b)—*

(A) the activity occurs in—

(i) a country listed by the Administrator pursuant to paragraph (2);

(ii) a state or province listed by the Administrator pursuant to paragraph (5); or

(iii) a country listed by the Administrator pursuant to paragraph (6);

(B) except as provided in paragraph (5) or (6), the quantity of the international offset credits is determined by comparing the national emissions from deforestation relative to a national deforestation baseline for that country established, in accordance with an agreement or arrangement described in subsection (b)(2)(A), pursuant to paragraph (4);

(C) the reduction in emissions from deforestation has occurred before the issuance of the international offset credit and, taking into consideration relevant international standards, has been demonstrated using ground-based inventories, remote sensing technology, and other methodologies to ensure that all relevant carbon stocks are accounted;

(D) the Administrator has made appropriate adjustments, such as discounting for any additional uncertainty, to account for circumstances specific to the country, including its technical capacity described in paragraph (2)(A);

(E) the Administrator has determined that the country within which the activity occurs has in place a publicly

available strategic plan that includes the criteria listed in paragraph (2)(C);

(F) the activity is designed, carried out, and managed—

(i) in accordance with forest management practices that—

(I) improve the livelihoods of forest communities;

(II) maintain the natural biodiversity, resilience, and carbon storage capacity of forests; and

(III) do not adversely impact the permanence of forest carbon stocks or emission reductions;

(ii) to promote or restore native forest species and ecosystems where practicable, and to avoid the introduction of invasive nonnative species;

(iii) in a manner that gives due regard to the rights and interests of local communities, indigenous peoples, forest-dependent communities, and vulnerable social groups;

(iv) with consultations with, and full participation of, local communities, indigenous peoples, and forest-dependent communities, in affected areas, as partners and primary stakeholders, prior to and during the design, planning, implementation, and monitoring and evaluation of activities;

(v) with transparent and equitable sharing of profits and benefits derived from offset credits with local communities, indigenous peoples, and forest-dependent communities;

(vi) with full transparency, third-party independent oversight, and public dissemination of related financial and contractual arrangements, and

(vii) so that the social and environmental impacts of these activities are monitored and reported in sufficient detail to allow appropriate officials to determine compliance with the requirements of this section;

(G) the reduction otherwise satisfies and is consistent with any relevant requirements established by an agreement reached under the auspices of the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992; and

(H) in the case that offsets are determined by comparing the national emissions from deforestation relative to a national, state-level, or province-level deforestation baseline as provided in paragraph (4) or (5)—

(i) a list of activities to reduce deforestation is provided to the Administrator and made publicly available;

(ii) the social and environmental impacts of these activities are monitored and reported in sufficient detail to allow the Administrator to determine compliance with the requirements of this section; and

(iii) the distribution of revenues for activities to reduce deforestation is transparent, subject to independent third-party oversight, and publicly disseminated.

(2) ELIGIBLE COUNTRIES.—*The Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, and in accordance with an agreement or arrangement described in subsection (b)(2)(A), shall establish, and periodically review and update, a list of the developing countries that have the capacity to participate in deforestation reduction activities at a national level, including—*

(A) the technical capacity to monitor, measure, report, and verify forest carbon fluxes for all significant sources of greenhouse gas emissions from deforestation with an acceptable level of uncertainty, as determined taking into account relevant internationally accepted methodologies, such as those established by the Intergovernmental Panel on Climate Change;

(B) the institutional capacity to reduce emissions from deforestation, including strong forest governance and mechanisms to ensure transparency and third-party independent oversight of offset activities and revenues, and the transparent and equitable distribution of offset revenues for local actions; and

(C) a land use or forest sector strategic plan that—

(i) assesses national and local drivers of deforestation and forest degradation and identifies reforms to national policies needed to address them;

(ii) estimates the country's emissions from deforestation and forest degradation;

(iii) identifies improvements in and a timeline for data collection, monitoring, and institutional capacity necessary to implement an effective national deforestation reduction program that meets the criteria set forth in this section (including a national deforestation baseline);

(iv) establishes a timeline for implementing the program and transitioning forest-based economies to low-emissions development pathways with respect to emissions from forest and land use activities;

(v) includes a national policy for consultations with, and full participation of, all stakeholders, especially indigenous and forest-dependent communities, in its design, planning, and implementation of activities, whether at the national or local level, to reduce deforestation in the country (including a national process for addressing grievances if stakeholders have been caused social, environmental, or economic harm);

(vi) provides for the distribution of revenues for activities to reduce deforestation transparently and publicly, subject to independent third-party oversight; and

(vii) includes a national platform or a type of registry for information relating to deforestation and degradation policy and program implementation processes, including a mechanism for the monitoring and reporting of the social and environmental impacts of those activities.

(3) PROTECTION OF INTERESTS.—*With respect to an agreement or arrangement described in subsection (b)(2)(A) with a country that addresses international offset credits under this subsection, the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, shall undertake due diligence to ensure the establishment and enforcement by such country of legal regimes, processes, standards, and safeguards that—*

(A) give due regard to the rights and interests of local communities, indigenous peoples, forest-dependent communities, and vulnerable social groups;

(B) promote consultations with, and full participation of, forest-dependent communities and indigenous peoples in affected areas, as partners and primary stakeholders, prior to and during the design, planning, implementation, and monitoring and evaluation of activities; and

(C) encourage transparent and equitable sharing of profits and benefits derived from international offset credits with local communities, indigenous peoples, and forest-dependent communities.

(4) NATIONAL DEFORESTATION BASELINE.—*A national deforestation baseline established under this subsection shall—*

(A) be national in scope;

(B) be consistent with nationally appropriate mitigation commitments or actions with respect to deforestation, taking into consideration the average annual historical deforestation rates of the country during a period of at least 5 years, the applicable drivers of deforestation, and other factors to ensure that only reductions that are in addition to such commitments or actions will generate offsets;

(C) establish a trajectory that would result in zero net deforestation by not later than 20 years after the national deforestation baseline has been established, including a spatially explicit land use plan that identifies intact and primary forest areas and managed forest areas that are to remain while the country is reaching the zero net deforestation trajectory;

(D) be adjusted over time to take account of changing national circumstances;

(E) be designed to account for all significant sources of greenhouse gas emissions from deforestation in the country; and

(F) be consistent with the national deforestation baseline, if any, established for such country under section 753.

(5) STATE-LEVEL OR PROVINCE-LEVEL ACTIVITIES.—

(A) ELIGIBLE STATES OR PROVINCES.—*The Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, shall establish, and periodically review and update, a list of states or provinces in developing countries where—*

(i) the developing country is not included on the list of countries established pursuant to paragraph (6)(A);

(ii) the State or province is undertaking deforestation reduction activities;

(iii) the state or province has the capacity to engage in deforestation reduction activities at the state or province level, including—

(I) the technical capacity to monitor and measure forest carbon fluxes for all significant sources of greenhouse gas emissions from deforestation with an acceptable amount of uncertainty, including a spatially explicit land use plan that identifies intact and primary forest areas and managed forest areas that are to remain while the country is reaching the zero net deforestation trajectory; and

(II) the institutional capacity to reduce emissions from deforestation, including strong forest governance and mechanisms to deliver forest conservation resources for local actions;

(iv) the state or province meets the eligibility criteria in paragraphs (2) and (3) for the geographic area under its jurisdiction; and

(v) the country—

(I) demonstrates that efforts are underway to transition to a national program within 5 years; or

(II) in the determination of the Administrator, is making a good-faith effort to develop a land use or forest sector strategic national plan or program that meets the criteria described in paragraph (2)(C).

(B) ACTIVITIES.*—The Administrator may issue international offset credits for greenhouse gas emission reductions achieved through activities to reduce deforestation at a state or provincial level that meet the requirements of this section. Such credits shall be determined by comparing the emissions from deforestation within that state or province relative to the state or province deforestation baseline for that state or province established, in accordance with an agreement or arrangement described in subsection (b)(2)(A), pursuant to subparagraph (C) of this paragraph.*

(C) STATE-LEVEL OR PROVINCE-LEVEL DEFORESTATION BASELINE.*—A state-level or province-level deforestation baseline shall—*

(i) be consistent with any existing nationally appropriate mitigation commitments or actions for the country in which the activity is occurring, so that only reductions that are in addition to those commitments or actions will generate offsets;

(ii) be developed taking into consideration the average annual historical deforestation rates of the state or province during a period of at least 5 years, relevant drivers of deforestation, and other factors to ensure additionality;

(iii) establish a trajectory that would result in zero net deforestation by not later than 20 years after the

state-level or province-level deforestation baseline has been established; and

(iv) be designed to account for all significant sources of greenhouse gas emissions from deforestation in the state or province and adjusted to fully account for emissions leakage outside the state or province through monitoring of major forested areas in the host country and other areas of the host country susceptible to leakage.

(D) PHASE OUT.—*Beginning 5 years after the first calendar year for which a covered entity must demonstrate compliance with section 722(a), the Administrator shall issue no further international offset credits for eligible state-level or province-level activities to reduce deforestation pursuant to this paragraph.*

(6) PROJECTS AND PROGRAMS TO REDUCE DEFORESTATION.—

(A) ELIGIBLE COUNTRIES.—*The Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, shall establish, and periodically review and update, a list of developing countries that—*

(i) the Administrator determines, based on recent, credible, and reliable emissions data, account for less than 1 percent of global greenhouse gas emissions and less than 3 percent of global forest-sector and land use change greenhouse gas emissions;

(ii) have, or in the determination of the Administrator are making a good faith effort to develop, a land use or forest sector strategic plan that meets the criteria described in paragraph (2)(C); and

(iii) has made, or in the determination of the Administrator, is making, a good-faith effort to develop, through the implementation of activities under this section, a monitoring program for major forested areas in a host country and other areas in a host country susceptible to leakage, including a spatially explicit land use plan that identifies intact and primary forest areas and managed forest areas that are to remain while country is reaching the zero net deforestation trajectory.

(B) ACTIVITIES.—*The Administrator may issue international offset credits for greenhouse gas emission reductions achieved through project or program level activities to reduce deforestation in countries listed under subparagraph (A) that meet the requirements of this section. The quantity of international offset credits shall be determined by comparing the project-level or program-level emissions from deforestation to a deforestation baseline for such project or program established pursuant to subparagraph (C).*

(C) PROJECT-LEVEL OR PROGRAM-LEVEL BASELINE.—*A project-level or program-level deforestation baseline shall—*

(i) be consistent with any existing nationally appropriate mitigation commitments or actions for the country in which the project or program is occurring, so

that only reductions that are in addition to such commitments or actions will generate offsets;

(ii) be developed taking into consideration the average annual historical deforestation rates in the project or program boundary during a period of at least 5 years, applicable drivers of deforestation, and other factors to ensure additionality;

(iii) be designed to account for all significant sources of greenhouse gas emissions from deforestation in the project or program boundary; and

(iv) be adjusted to fully account for emissions leakage outside the project or program boundary, including—

(I) estimation through monitoring of major forested areas in a host country and other areas in a host country susceptible to leakage, pursuant to section 744(e)(5); and

(II) a spatially explicit land use plan that identifies intact and primary forest areas and managed forest areas that are to remain while country is reaching the zero net deforestation trajectory

(D) PHASE-OUT.—

(i) IN GENERAL.—*Beginning on the date that is 8 years after the first calendar year for which a covered entity must demonstrate compliance with section 722(a), the Administrator shall issue no further international offset credits for project-level or program-level activities as described in this paragraph, except as provided in clause (ii).*

(ii) EXTENSION.—*The Administrator may extend the phase out deadline for the issuance of international offset credits under this section by up to 5 years with respect to eligible activities taking place in a least developed country, which is a foreign country that the United Nations has identified as among the least developed of developing countries at the time that the Administrator determines to provide an extension, provided that the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, determines the country—*

(I) lacks sufficient capacity to adopt and implement effective programs to achieve reductions in deforestation measured against national baselines;

(II) is receiving support under part E to develop such capacity; and

(III) has developed and is working to implement a credible national strategy or plan to reduce deforestation.

(7) OFFSET CREDIT ISSUANCE.—*Requirements under this subsection to issue international offset credits only if the quantity of the international offset credits is determined by reference to a national, State-level, or province-level deforestation baseline do not preclude the Administrator from issuing a portion of the total quantity of those credits directly to an offset project devel-*

oper for use in carrying out activities in accordance with this section that contributed to a reduction in emissions, if that issuance is authorized by—

(A) the agreement or arrangement described in subsection (b)(2)(A); and

(B) if the credits are issued pursuant to paragraph (5), by the State or provincial government.

(8) EXPANSION OF SCOPE.*—In implementing this subsection, the Administrator, taking into consideration the recommendations of the Advisory Board, may expand the scope of creditable activities to include activities that reduce emissions from land use, such as those that address forest degradation or soil carbon losses associated with forested wetlands or peatlands.*

(f) MODIFICATION OF REQUIREMENTS.*—In promulgating regulations under subsection (b)(1) with respect to the issuance of international offset credits under subsection (c), (d), or (e), the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, may modify or omit a requirement of this part (excluding the requirements of this section) if the Administrator determines that the application of that requirement to such subsection is not feasible or would result in the creation of offset credits that would not be eligible to satisfy emissions reduction commitments made by the United States pursuant to the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992 (or any successor agreement). In modifying or omitting such a requirement on the basis of infeasibility, the Administrator, in consultation with the Secretary of State and the Administrator of the United States Agency for International Development, shall ensure, with an adequate margin of safety, the integrity of international offset credits issued under this section and of the greenhouse gas emissions limitations established pursuant to section 703.*

(g) AVOIDING DOUBLE COUNTING.*—The Administrator, in consultation with the Secretary of State, shall seek, by whatever means appropriate, including agreements, arrangements, or technical cooperation, to ensure that activities on the basis of which international offset credits are issued under this section are not used for compliance with an obligation to reduce or avoid greenhouse gas emissions, or increase greenhouse gas sequestration, under a foreign or international regulatory system. In addition, no international offset credits shall be issued for emission reductions from activities with respect to which emission allowances were allocated under section 771(c) for distribution under part E.*

(h) LIMITATION.*—The Administrator shall not issue international offset credits generated by projects based on the destruction of hydrofluorocarbons.*

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PART E—SUPPLEMENTAL EMISSION REDUCTIONS

SEC. 751. DEFINITIONS.

In this part:

(1) ADMINISTRATOR.—*The term 'Administrator' means the Administrator of the United States Agency for International Development.*

(2) DEFORESTATION.—*The term 'deforestation' means a change in land use from a forest to any other land use.*

"(3) DEGRADATION.—The term 'degradation', with respect to a forest, is any reduction in the carbon stock of a forest due to the impact of human land-use activities.

(4) EMISSION REDUCTIONS.—*The term 'emission reductions' means greenhouse gas emission reductions achieved from reduced or avoided deforestation under this title.*

(5) LEAKAGE PREVENTION ACTIVITIES.—*The term 'leakage prevention activities' means activities in developing countries that are directed at preserving existing forest carbon stocks, including forested wetlands and peatlands, that might, absent such activities, be lost through leakage.*

SEC. 752. PURPOSES.

The purposes of this part are to provide United States assistance to developing countries—

(1) to develop, implement and improve nationally appropriate greenhouse gas mitigation policies and actions that reduce deforestation and forest degradation or conserve or restore forest ecosystems, in a measurable, reportable, and verifiable manner; and

(2) in a manner that is consistent with and enhances the implementation of complementary United States policies that support the good governance of forests, biodiversity conservation, and environmentally sustainable development, while taking local communities, most vulnerable populations and communities, particularly forest-dependent communities and indigenous peoples into consideration.

SEC. 753. EMISSION REDUCTIONS FROM REDUCED DEFORESTATION.

(a) IN GENERAL.—*Not later than 2 years after the date of the enactment of this part, the Administrator, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Agriculture, and the head of any other appropriate agency, shall establish a program to provide assistance to reduce greenhouse gas emissions from deforestation in developing countries, in accordance with this title.*

(b) OBJECTIVES.—*The objectives of the program established under this section shall be—*

(1) to reduce greenhouse gas emissions from deforestation in developing countries by at least 720,000,000 tons of carbon dioxide equivalent in 2020, and a cumulative quantity of at least 6,000,000,000 tons of carbon dioxide equivalent by December 31, 2025, with additional reductions in subsequent years;

(2) to assist developing countries in preparing to participate in international markets for international offset credits for reduced emissions from deforestation; and

(3) to preserve existing forest carbon stocks in countries where such forest carbon may be vulnerable to international leakage.

(c) NOT ELIGIBLE FOR OFFSET CREDIT.—*Activities that receive support under this part shall not be issued offset credits for the*

greenhouse gas emissions reductions or avoidance, or greenhouse gas sequestration, produced by such activities.

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PART F—ENSURING REAL REDUCTIONS IN INDUSTRIAL EMISSIONS

SEC. 761. PURPOSES.

The purposes of this part are—

(1) to promote a strong global effort to significantly reduce greenhouse gas emissions, and, through this global effort, stabilize greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous anthropogenic interference with the climate system;

(2) to prevent an increase in greenhouse gas emissions in countries other than the United States as a result of direct and indirect compliance costs incurred under this title;

(3) to provide a rebate to the owners and operators of entities in domestic eligible industrial sectors for their greenhouse gas emission costs incurred under this title, but not for costs associated with other related or unrelated market dynamics;

(4) to design such rebates in a way that will prevent carbon leakage while also rewarding innovation and facility-level investments in energy efficiency performance improvements; and

(5) to eliminate or reduce distribution of emission allowances under this part when such distribution is no longer necessary to prevent carbon leakage from eligible industrial sectors.

SEC. 762. DEFINITIONS.

In this part:

(1) CARBON LEAKAGE.*—The term 'carbon leakage' means any substantial increase (as determined by the Administrator) in greenhouse gas emissions by industrial entities located in other countries if such increase is caused by an incremental cost of production increase in the United States resulting from the implementation of this title.*

(2) ELIGIBLE INDUSTRIAL SECTOR.*—The term 'eligible industrial sector' means an industrial sector determined by the Administrator under section 763(b) to be eligible to receive emission allowance rebates under this part.*

(3) INDUSTRIAL SECTOR.*—*

(A) IN GENERAL.*—The term 'industrial sector' means any sector that—*

(i) is in the manufacturing sector (as defined in NAICS codes 31, 32, and 33); or

(ii) is part of, or an entire, sector that beneficiates or otherwise processes (including agglomeration) metal ores, including iron and copper ores, soda ash, or phosphate.

(B) EXCLUSION.*—The term 'industrial sector' does not include any part of a sector that extracts metal ores, soda ash, or phosphate.*

(4) NAICS.*—The term 'NAICS' means the North American Industrial Classification System of 2002.*

(5) OUTPUT.—*The term 'output' means the total tonnage or other standard unit of production (as determined by the Administrator) produced by an entity in an industrial sector. The output of the cement sector is hydraulic cement, and not clinker.*

SEC. 763. ELIGIBLE INDUSTRIAL SECTORS.

(a) LIST.—

(1) INITIAL LIST.—*Not later than June 30, 2011, the Administrator shall publish in the Federal Register a list of eligible industrial sectors pursuant to subsection (b). Such list shall include the amount of the emission allowance rebate per unit of production that shall be provided to entities in each eligible industrial sector in the following two calendar years pursuant to section 764.*

(2) SUBSEQUENT LISTS.—*Not later than February 1, 2013, and every 4 years thereafter, the Administrator shall publish in the Federal Register an updated version of the list published under paragraph (1).*

(b) ELIGIBLE INDUSTRIAL SECTORS.—

(1) IN GENERAL.—*Not later than June 30, 2011, the Administrator shall promulgate a rule designating, based on the criteria under paragraph (2), the industrial sectors eligible for emission allowance rebates under this part.*

(2) PRESUMPTIVELY ELIGIBLE INDUSTRIAL SECTORS.—

(A) ELIGIBILITY CRITERIA.—

(i) IN GENERAL.—*An owner or operator of an entity shall be eligible to receive emission allowance rebates under this part if such entity is in an industrial sector that is included in a six-digit classification of the NAICS that meets the criteria in both clauses (ii) and (iii), or the criteria in clause (iv).*

(ii) ENERGY OR GREENHOUSE GAS INTENSITY.—*As determined by the Administrator, the industrial sector had—*

(I) an energy intensity of at least 5 percent, calculated by dividing the cost of purchased electricity and fuel costs of the sector by the value of the shipments of the sector, based on data described in subparagraph (D); or

(II) a greenhouse gas intensity of at least 5 percent, calculated by dividing—

(aa) the number 20 multiplied by the number of tons of carbon dioxide equivalent greenhouse gas emissions (including direct emissions from fuel combustion, process emissions, and indirect emissions from the generation of electricity used to produce the output of the sector) of the sector based on data described in subparagraph (D); by

(bb) the value of the shipments of the sector, based on data described in subparagraph (D).

(iii) TRADE INTENSITY.—*As determined by the Administrator, the industrial sector had a trade intensity of at least 15 percent, calculated by dividing the value of the total imports and exports of such sector by the*

value of the shipments plus the value of imports of such sector, based on data described in subparagraph (D).

(iv) VERY HIGH ENERGY OR GREENHOUSE GAS INTENSITY.—*As determined by the Administrator, the industrial sector had an energy or greenhouse gas intensity, as calculated under clause (ii)(I) or (II), of at least 20 percent.*

(B) METAL AND PHOSPHATE PRODUCTION CLASSIFIED UNDER MORE THAN ONE NAICS CODE.—*For purposes of this section, the Administrator shall—*

(i) aggregate data for the beneficiation or other processing (including agglomeration) of metal ores, including iron and copper ores, soda ash, or phosphate with subsequent steps in the process of metal and phosphate manufacturing, regardless of the NAICS code under which such activity is classified; and

(ii) aggregate data for the manufacturing of steel with the manufacturing of steel pipe and tube made from purchased steel in a nonintegrated process.

(C) EXCLUSION.—*The petroleum refining sector shall not be an eligible industrial sector.*

(D) DATA SOURCES.—

(i) ELECTRICITY AND FUEL COSTS, VALUE OF SHIPMENTS.—*The Administrator shall determine electricity and fuel costs and the value of shipments under this subsection from data from the United States Census Annual Survey of Manufacturers. The Administrator shall take the average of data from as many of the years of 2004, 2005, and 2006 for which such data are available. If such data are unavailable, the Administrator shall make a determination based upon 2002 or 2006 data from the most detailed industrial classification level of Energy Information Agency's Manufacturing Energy Consumption Survey (using 2006 data if it is available) and the 2002 or 2007 Economic Census of the United States (using 2007 data if it is available). If data from the Manufacturing Energy Consumption Survey or Economic Census are unavailable for any sector at the six-digit classification level in the NAICS, then the Administrator may extrapolate the information necessary to determine the eligibility of a sector under this paragraph from available Manufacturing Energy Consumption Survey or Economic Census data pertaining to a broader industrial category classified in the NAICS. If data relating to the beneficiation or other processing (including agglomeration) of metal ores, including iron and copper ores, soda ash, or phosphate are not available from the specified data sources, the Administrator shall use the best available Federal or State government data and may use, to the extent necessary, representative data submitted by entities that perform such beneficiation or other processing (including agglomeration), in making a determination.*

Fuel cost data shall not include the cost of fuel used as feedstock by an industrial sector.

(ii) IMPORTS AND EXPORTS.—*The Administrator shall base the value of imports and exports under this subsection on United States International Trade Commission data. The Administrator shall take the average of data from as many of the years of 2004, 2005, and 2006 for which such data are available. If data from the United States International Trade Commission are unavailable for any sector at the six-digit classification level in the NAICS, then the Administrator may extrapolate the information necessary to determine the eligibility of a sector under this paragraph from available United States International Trade Commission data pertaining to a broader industrial category classified in the NAICS.*

(iii) PERCENTAGES.—*The Administrator shall round the energy intensity, greenhouse gas intensity, and trade intensity percentages under subparagraph (A) to the nearest whole number.*

(iv) GREENHOUSE GAS EMISSION CALCULATIONS.—*When calculating the tons of carbon dioxide equivalent greenhouse gas emissions for each sector under subparagraph (A)(ii)(II)(aa), the Administrator—*

(I) shall use the best available data from as many of the years 2004, 2005, and 2006 for which such data is available; and

(II) may, to the extent necessary with respect to a sector, use economic and engineering models and the best available information on technology performance levels for such sector.

(3) ADMINISTRATIVE DETERMINATION OF ADDITIONAL ELIGIBLE INDUSTRIAL SECTORS.—

(A) UPDATED TRADE INTENSITY DATA.—*The Administrator shall designate as eligible to receive emission allowance rebates under this part an industrial sector that—*

(i) met the energy or greenhouse gas intensity criteria in paragraph (2)(A)(ii) as of the date of promulgation of the rule under paragraph (1); and

(ii) meets the trade intensity criteria in paragraph (2)(A)(iii), using data from any year after 2006.

(B) INDIVIDUAL SHOWING PETITION.—

(i) PETITION.—*In addition to designation under paragraph (2) or subparagraph (A) of this paragraph, the owner or operator of an entity in an industrial sector may petition the Administrator to designate as eligible industrial sectors under this part an entity or a group of entities that—*

(I) represent a subsector of a six-digit section of the NAICS code; and

(II) meet the eligibility criteria in both clauses (ii) and (iii) of paragraph (2)(A), or the eligibility criteria in clause (iv) of paragraph (2)(A).

(ii) DATA.—*In making a determination under this subparagraph, the Administrator shall consider data submitted by the petitioner that is specific to the entity, data solicited by the Administrator from other entities in the subsector, if such other entities exist, and data specified in paragraph (2)(D).*

(iii) BASIS OF SUBSECTOR DETERMINATION.—*The Administrator shall determine an entity or group of entities to be a subsector of a six-digit section of the NAICS code based only upon the products manufactured and not the industrial process by which the products are manufactured, except that the Administrator may determine an entity or group of entities that manufacture a product from primarily virgin material to be a separate subsector from another entity or group of entities that manufacture the same product primarily from recycled material.*

(iv) USE OF MOST RECENT DATA.—*In determining whether to designate a sector or subsector as an eligible industrial sector under this subparagraph, the Administrator shall use the most recent data available from the sources described in paragraph (2)(D), rather than the data from the years specified in paragraph (2)(D), to determine the trade intensity of such sector or subsector, but only for determining such trade intensity.*

(v) FINAL ACTION.—*The Administrator shall take final action on such petition no later than 6 months after the petition is received by the Administrator.*

SEC. 764. DISTRIBUTION OF EMISSION ALLOWANCE REBATES.

(a) DISTRIBUTION SCHEDULE.—

(1) IN GENERAL.—*For each vintage year, the Administrator shall distribute pursuant to this section emission allowances made available under section 771(a)(5), not later than October 31 of the preceding calendar year. The Administrator shall make such annual distributions to the owners and operators of each entity in an eligible industrial sector in the amount of emission allowances calculated under subsection (b), except that—*

(A) for vintage years 2012 and 2013, the distribution for a covered entity shall be pursuant to the entity's indirect carbon factor as calculated under subsection (b)(3);

(B) for vintage year 2026 and thereafter, the distribution shall be pursuant to the amount calculated under subsection (b) multiplied by, for a sector—

(i) 90 percent for vintage year 2026;
(ii) 80 percent for vintage year 2027;
(iii) 70 percent for vintage year 2028;
(iv) 60 percent for vintage year 2029;
(v) 50 percent for vintage year 2030;
(vi) 40 percent for vintage year 2031;
(vii) 30 percent for vintage year 2032;
(viii) 20 percent for vintage year 2033;
(ix) 10 percent for vintage year 2034; and
(x) 0 percent for vintage year 2035 and thereafter.

(2) NEWLY ELIGIBLE SECTORS.—*In addition to receiving a distribution of emission allowances under this section in the first distribution occurring after an industrial sector is designated as eligible under section 763(b)(3), the owner or operator of an entity in that eligible industrial sector may receive a prorated share of any emission allowances made available for distribution under this section that were not distributed for the year in which the petition for eligibility was granted under section 763(b)(3)(A).*

(3) CESSATION OF QUALIFYING ACTIVITIES.—*If, as determined by the Administrator, a facility is no longer in an eligible industrial sector designated under section 763—*

(A) the Administrator shall not distribute emission allowances to the owner or operator of such facility under this section; and

(B) the owner or operator of such facility shall return to the Administrator all allowances that have been distributed to it for future vintage years and a pro-rated amount of allowances distributed to the facility under this section for the vintage year in which the facility ceases to be in an eligible industrial sector designated under section 763.

(b) CALCULATION OF DIRECT AND INDIRECT CARBON FACTORS.—

(1) IN GENERAL.—

(A) COVERED ENTITIES.—*Except as provided in subsection (a), for covered entities that are in eligible industrial sectors, the amount of emission allowance rebates shall be based on the sum of the covered entity's direct and indirect carbon factors.*

(B) OTHER ELIGIBLE ENTITIES.—*For entities that are in eligible industrial sectors but are not covered entities, the amount of emission allowance rebates shall be based on the entity's indirect carbon factor.*

(C) NEW ENTITIES.—*Not later than 2 years after the date of enactment of this title, the Administrator shall issue regulations governing the distribution of emission allowance rebates for the first and second years of operation of a new entity in an eligible industrial sector. These regulations shall provide for—*

(i) the distribution of emission allowance rebates to such entities based on comparable entities in the same sector; and

(ii) an adjustment in the third and fourth years of operation to reconcile the total amount of emission allowance rebates received during the first and second years of operation to the amount the entity would have received during the first and second years of operation had the appropriate data been available.

(2) DIRECT CARBON FACTOR.—*The direct carbon factor for a covered entity for a vintage year is the product of—*

(A) the average annual output of the covered entity for the 2 years preceding the year of the distribution; and

(B) the most recent calculation of the average direct greenhouse gas emissions (expressed in tons of carbon dioxide equivalent) per unit of output for all covered entities in

the sector, as determined by the Administrator under paragraph (4).

(3) INDIRECT CARBON FACTOR.—

(A) IN GENERAL.—*The indirect carbon factor for an entity for a vintage year is the product obtained by multiplying the average annual output of the entity for the 2 years preceding the year of the distribution by both the electricity emissions intensity factor determined pursuant to subparagraph (B) and the electricity efficiency factor determined pursuant to subparagraph (C) for the year concerned.*

(B) ELECTRICITY EMISSIONS INTENSITY FACTOR.—

(i) IN GENERAL.—*Each person selling electricity to the owner or operator of an entity in any sector designated as an eligible industrial sector under section 763(b) shall provide the owner or operator of the entity and the Administrator, on an annual basis, the electricity emissions intensity factor for the entity. The electricity emissions intensity factor for the entity, expressed in tons of carbon dioxide equivalents per kilowatt hour, is determined by dividing—*

(I) the annual sum of the hourly product of—

(aa) the electricity purchased by the entity from that person in each hour (expressed in kilowatt hours); multiplied by

(bb) the marginal or weighted average tons of carbon dioxide equivalent per kilowatt hour that are reflected in the electricity charges to the entity, as determined by the entity's retail rate arrangements; by

(II) the total kilowatt hours of electricity purchased by the entity from that person during that year.

(ii) USE OF OTHER DATA TO DETERMINE FACTOR.—*Where it is not possible to determine the precise electricity emissions intensity factor for an entity using the methodology in clause (i), the person selling electricity shall use the monthly average data reported by the Energy Information Administration or collected and reported by the Administrator for the utility serving the entity to determine the electricity emissions intensity factor.*

(C) ELECTRICITY EFFICIENCY FACTOR.—*The electricity efficiency factor is the average amount of electricity (in kilowatt hours) used per unit of output for all entities in the relevant sector, as determined by the Administrator based on the best available data, including data provided under paragraph (6).*

(D) INDIRECT CARBON FACTOR REDUCTION.—*If an electricity provider received a free allocation of emission allowances pursuant to section 771(a)(1), the Administrator shall adjust the indirect carbon factor to avoid rebates to the eligible entity for costs that the Administrator determines were not incurred by the eligible entity because the allow-*

ances were freely allocated to the eligible entity's electricity provider and used for the benefit of industrial consumers.

(4) GREENHOUSE GAS INTENSITY CALCULATIONS.—*The Administrator shall calculate the average direct greenhouse gas emissions (expressed in tons of carbon dioxide equivalent) per unit of output and the electricity efficiency factor for all covered entities in each eligible industrial sector every 4 years, using an average of the 5 most recent years of the best available data, from up to 7 years prior to the year in which such calculations are made. For the purpose of determining sector averages that are representative of typical market conditions during the previous 7 years of operations, such averages shall exclude data from individual years with the highest and the lowest direct greenhouse gas emissions per unit of output and electricity efficiency factors. For purposes of the lists required to be published not later than February 1, 2013, the Administrator shall use the best available data for the maximum number of years, up to 5 years, for which data are available.*

(5) DETERMINATION OF SECTORS FOR PURPOSES OF SECTORAL AVERAGES.—

(A) IN GENERAL.—*Notwithstanding the criteria used to determine eligible sectors under paragraphs (2) and (3)(C), not later than June 30, 2011, the Administrator shall, by rule, identify sectors or subsectors for purposes of calculating sector averages under paragraphs (2)(B), (3)(C), and (4), based upon, to the extent practicable in achieving the purposes of this part—*

(i) product produced;

(ii) process employed, including distinctions based upon the extent of integration or exclusion of process steps; and

(iii) the extent of use of combined heat and power technologies.

(B) CONSIDERATION OF CRITERIA.—*In determining what entities are comparable to a new entity under paragraph (1)(C)(i), the Administrator shall consider, to the extent practicable, the criteria set forth in subparagraph (A).*

(6) ENSURING EFFICIENCY IMPROVEMENTS.—*When making greenhouse gas calculations, the Administrator shall—*

(A) limit the average direct greenhouse gas emissions per unit of output, calculated under paragraph (4), for any eligible industrial sector to an amount that is not greater than it was in any previous calculation under this subsection;

(B) limit the electricity emissions intensity factor, calculated under paragraph (3)(B) and resulting from a change in electricity supply, for any entity to an amount that is not greater than it was during any previous year; and

(C) limit the electricity efficiency factor, calculated under paragraph (3)(C), for any eligible industrial sector to an amount that is not greater than it was in any previous calculation under this subsection.

(7) DATA SOURCES.—*For the purposes of this subsection—*

(A) the Administrator shall use data from the greenhouse gas registry established under section 713, where that data is available; and

(B) each owner or operator of an entity in an eligible industrial sector and each department, agency, and instrumentality of the United States shall provide the Administrator with such information as the Administrator finds necessary to determine the direct carbon factor and the indirect carbon factor for each entity subject to this section.

(c) TOTAL MAXIMUM DISTRIBUTION.—*Notwithstanding subsections (a) and (b), the Administrator shall not distribute more allowances for any vintage year pursuant to this section than are allocated for use under this part pursuant to section 765 for that vintage year. For any vintage year for which the total emission allowance rebates calculated pursuant to this section exceed the number of allowances allocated pursuant to section 765, the Administrator shall reduce each entity's distribution on a pro rata basis so that the total distribution under this section equals the number of allowances allocated under section 765.*

(d) IRON AND STEEL SECTOR.—*For purposes of this section, the Administrator shall consider as in different industrial sectors—*

(1) entities using integrated iron and steelmaking technologies (including coke ovens, blast furnaces, and other iron-making technologies); and

(2) entities using electric arc furnace technologies.

(e) METAL, SODA ASH, OR PHOSPHATE PRODUCTION CLASSIFIED UNDER MORE THAN ONE NAICS CODE.—*For purposes of this section, the Administrator shall not aggregate data for the beneficiation or other processing (including agglomeration) of metal ores, soda ash, or phosphate with subsequent steps in the process of metal, soda ash, or phosphate manufacturing. The Administrator shall consider the beneficiation or other processing (including agglomeration) of metal ores, soda ash, or phosphate to be in separate industrial sectors from the metal, soda ash, or phosphate manufacturing sectors. Industrial sectors that beneficiate or otherwise process (including agglomeration) metal ores, soda ash, or phosphate shall not receive emission allowance rebates under this section related to the activity of extracting metal ores, soda ash, or phosphate.*

(f) COMBINED HEAT AND POWER.—*For purposes of this section, and to achieve the purpose set forth in section 761(4),(the Administrator may consider entities to be in different industrial sectors or otherwise take into account the differences among entities in the same industrial sector, based upon the extent to which such entities use combined heat and power technologies.*

SEC. 765. INTERNATIONAL TRADE.

It is the sense of the Senate that this Act will contain a trade title that will include a border measure that is consistent with our international obligations and designed to work in conjunction with provisions that allocate allowances to energy-intensive and trade-exposed industries.

PART G—DISPOSITION OF ALLOWANCES

SEC. 771. ALLOCATION OF EMISSION ALLOWANCES.

(a) ALLOCATION.*—Subject to subsection (d), of the total quantity of emission allowances established for each vintage year under section 721(a), the Administrator shall allocate emission allowances for the purposes and for the vintage years and corresponding percentages specified as follows:*

(1) For the program for electricity consumers pursuant to section 772, as described in the following tables:

(A) For distribution to electricity consumers in accordance with subsections (b), (c), and (d) of section 772, the percentages specified in the following table:

Electricity consumers

Vintage Year	Percentage of allowances
2012	43.75
2013	43.75
2014	38.89
2015	38.89
2016	35.00
2017	35.00
2018	35.00
2019	35.00
2020	35.00
2021	35.00
2022	35.00
2023	35.00
2024	35.00
2025	35.00
2026	28.00
2027	21.00
2028	14.00
2029	7.00

(B) For distribution to small LDCs under section 772(e), the percentages specified in the following table:

Small LDCs

Vintage Year	Percentage of allowances
2012	0.50
2013	0.50
2014	0.50
2015	0.50
2016	0.50
2017	0.50

Small LDCs—Continued

2018	0.50
2019	0.50
2020	0.50
2021	0.50
2022	0.50
2023	0.50
2024	0.50
2025	0.50
2026	0.40
2027	0.30
2028	0.20
2029	0.10

(2) For the program for natural gas consumers pursuant to section 773, as described in the following table:

Natural gas consumers

Vintage Year	Percentage of allowances
2012	0.00
2013	0.00
2014	0.00
2015	0.00
2016	9.00
2017	9.00
2018	9.00
2019	9.00
2020	9.00
2021	9.00
2022	9.00
2023	9.00
2024	9.00
2025	9.00
2026	7.20
2027	5.40
2028	3.60
2029	1.80

(3) For the program for home heating oil and propane consumers pursuant to section 774, as described in the following table:

Home heating oil and propane consumers

Vintage Year	Percentage of allowances
2012	1.88
2013	1.88

Home heating oil and propane consumers—Continued

2014	1.67
2015	1.67
2016	1.50
2017	1.50
2018	1.50
2019	1.50
2020	1.50
2021	1.50
2022	1.50
2023	1.50
2024	1.50
2025	1.50
2026	1.20
2027	0.90
2028	0.60
2029	0.30

(4) For the program for domestic fuel production, including petroleum refiners and small business refiners, under section 775, for each of vintage years 2014 through 2026, for allocation and distribution in accordance with section 775—

(A) 1.25 percent of the emission allowances established for each vintage year under section 721(a) to domestic petroleum refineries that are covered entities described in section 700(13)(F)(viii); and

(B) an additional 1.0 percent of the emission allowances established for each vintage year under section 721(a) to small business refiners that are covered entities described in section 700(13)(F)(viii).

(5) In addition to emission allowances reserved under subsection (d)(5), subject to subparagraph (G), for the program to ensure real reductions in industrial emissions under part F, as follows:

(A) For each of vintage years 2012 and 2013, up to 4.0 percent of the emission allowances established for each year under section 721(a).

(B) For vintage year 2014, up to 15 percent of the emission allowances established for that year under section 721(a).

(C) For vintage year 2015, up to the product of—

(i) the quantity specified in subparagraph (B); multiplied by

(ii) the quantity of emission allowances established for 2015 under section 721(a) divided by the quantity of emission allowances established for 2014 under section 721(a).

(D) For vintage year 2016, up to the product obtained by multiplying—

(i) the quantity specified in subparagraph (C); and

(ii) the quantity of emission allowances established for 2015 under section 721(a) divided by the quantity

of emission allowances established for 2014 under section 721(a).

(E) For vintage years 2017 through 2025, up to the product obtained by multiplying—

(i) the quantity specified in subparagraph (D); and

(ii) the quantity of emission allowances established for that year under section 721(a) divided by the quantity of emission allowances established for 2016 under section 721(a).

(F) For vintage years 2026 through 2050, up to the product of the quantity specified in subparagraph (D)—

(i) multiplied by the quantity of emission allowances established for the applicable year during 2026 through 2050 under section 721(a) divided by the quantity of emission allowances established for 2016 under section 721(a); and

(ii) multiplied by a factor that shall equal 90 percent for 2026 and decline 10 percent for each year thereafter until reaching 0.

(G) If the Administrator has not distributed all of the allowances allocated pursuant to this paragraph for a given vintage year by the end of that year, any emission allowances allocated to entities in eligible industrial sectors pursuant to this paragraph that have not been so distributed shall, in accordance with subsection (e), be exchanged for allowances from the following vintage year and treated as part of the allocation to such entities for that later vintage year.

(6)(A) Subject to subparagraph (B), for the program for commercial deployment of carbon capture and sequestration technologies under section 780, as described in the following table:

Deployment of carbon capture and sequestration technology

Vintage Year	Percentage of allowances
2012	0.00
2013	0.00
2014	1.75
2015	1.75
2016	1.75
2017	1.75
2018	4.75
2019	4.75
Each of vintage years 2020 through 2050	5.00

(B) If the Administrator has not distributed all of the allowances allocated pursuant to this paragraph for a given vintage year by the end of that year, all such undistributed emission allowances shall, in accordance with subsection (e), be exchanged for allowances from the following vintage year and treated as part of the allocation for the deployment of carbon capture and

sequestration technology under this subsection for that later vintage year.

(7) For the program for early action recognition pursuant to section 782, 2.0 percent of the emission allowances for each of vintage years 2012 and 2013.

(8) For the program for investment in clean vehicle technology under section 201 of division B of the Clean Energy Jobs and American Power Act—

(A) for each of vintage years 2012 through 2017, 2.4 percent of the emission allowances; and

(B) for each of vintage years 2018 through 2025, 0.8 percent of the emission allowances.

(9)(A) In addition to the emission allowances reserved under subsection (d)(6), subject to subparagraph (B), for the program for State and local investment in energy efficiency and renewable energy under section 202 of division B of the Clean Energy Jobs and American Power Act, as described in the following table:

Investment in energy efficiency and renewable energy

Vintage Year	Percentage of allowances
2012	10.35
2013	10.35
2014	8.55
2015	8.55
2016	5.85
2017	6.12
2018	5.22
2019	5.22
2020	4.95
2021	4.95
2022	0.90
2023	0.90
2024	0.90
2025	0.90
Each of vintage years 2026 through 2050	4.05

(B) At the time at which allowances are distributed under subparagraph (A) for each of vintage years 2022 through 2025, 3.2 percent of emission allowances established under section 721(a) for the vintage year that is 4 years after that vintage year shall also be distributed (which shall be in addition to the emission allowances distributed under subparagraph (A) for vintage years 2026 through 2050.

(10) For the program for energy efficiency in building codes under section 163 of division A, and section 203 of division B, of the Clean Energy Jobs and American Power Act, 0.50 percent of the emission allowances for each of vintage years 2012 through 2050.

(11) For the program for Energy Innovation Hubs pursuant to section 204 of division B of the Clean Energy Jobs and American Power Act—

(A) for each of vintage years 2012 through 2015, 0.75 percent of the emission allowances; and

(B) for each of vintage years 2016 through 2050, 0.45 percent of the emission allowances.

(12) For the program for ARPA–E research pursuant to section 205 of division B of the Clean Energy Jobs and American Power Act—

(A) for each of vintage years 2012 and 2013, 3.25 percent of the emission allowances; and

(B) for each of vintage years 2014 through 2050, 1.25 percent of the emission allowances.

(13) For the International Clean Energy Deployment Program under section 323 of division A, and section 206 of division B, of the Clean Energy Jobs and American Power Act—

(A) for each of vintage years 2012 through 2021, 1.0 percent of the emission allowances;

(B) for each of vintage years 2022 through 2026, 2.0 percent of the emission allowances; and

(C) for each of vintage years 2027 through 2050, 3.0 percent of the emission allowances.

(14) In addition to the emission allowances reserved under subsection (d)(8), for the international climate change adaptation and global security program under section 324 of division A, and section 207 of division B, of the Clean Energy Jobs and American Power Act—

(A) for each of vintage years 2012 through 2021, 1.0 percent of the emission allowances;

(B) for each of vintage years 2022 through 2026, 2.0 percent of the emission allowances; and

(C) for each of vintage years 2027 through 2050, 5.0 percent of the emission allowances.

(15) For State programs for greenhouse gas reduction and climate adaptation pursuant to section 210(d) of division B of the Clean Energy Jobs and American Power Act, as described in the following table:

State programs for greenhouse gas reduction and adaptation

Vintage Year	Percentage of allowances
2012	1.34
2013	1.34
2014	0.50
2015	0.50
2016	0.50
2017	0.50
2018	0.50
2019	0.50
2020	0.50

State programs for greenhouse gas reduction and adaptation—Continued

2021	0.50
2022	1.06
2023	1.06
2024	1.06
2025	1.06
2026	1.06
Each of vintage years 2027 through 2050	2.18

(16) For State programs for natural resource adaptation activities under the program for climate change safeguards for natural resources conservation under section 370(a)(1) of division A, and section 216 of division B, of the Clean Energy Jobs and American Power Act, as described in the following table:

State programs for natural resource adaptation

Vintage Year	Percentage of allowances
2012	0.39
2013	0.39
2014	0.39
2015	0.39
2016	0.39
2017	0.39
2018	0.39
2019	0.39
2020	0.39
2021	0.39
2022	0.77
2023	0.77
2024	0.77
2025	0.77
2026	0.77
Each of vintage years 2027 through 2050	1.54

(b) AUCTIONS.—*Subject to subsection (d), of the total quantity of emission allowances established for each calendar year under section 721(a), the Administrator shall auction, pursuant to section 778, emission allowances for the purposes and for the vintage or calendar years and corresponding percentages specified as follows:*

(1) Emission allowances reserved under subsection (d)(9) for the Market Stability Reserve Fund under section 726.

(2) For the program for climate change consumer refunds and low- and moderate-income consumers pursuant to section 776—

(A) emission allowances for consumer rebates under section 776(a), pursuant to subsection (e)(2); and

(B) emission allowances for energy refunds under section 776(b), as follows:

(i) For each of calendar years 2012 through 2029, 15.00 percent of the emission allowances.

(ii) For each of calendar years 2030 through 2050, 18.50 percent of the emission allowances.

(iii) For calendar year 2051 and each calendar year thereafter, 15.00 percent of the emission allowances.

(3) For the program for investment in clean vehicle technology under section 201 of division B of the Clean Energy Jobs and American Power Act—

(A) for each of calendar years 2012 through 2017, 0.6 percent of the emission allowances; and

(B) for each of calendar years 2018 through 2025, 0.2 percent of the emission allowances.

(4) For the program for energy efficiency and renewable energy worker training under section 208 of division B of the Clean Energy Jobs and American Power Act—

(A) for each of calendar years 2012 and 2013, 1.0 percent of the emission allowances; and

(B) for each of calendar years 2014 and 2015, 0.05 percent of the emission allowances.

(5) For the program for worker transition under part 2 of subtitle A of title III of division A, and section 209 of division B, of the Clean Energy Jobs and American Power Act—

(A) for each of calendar years 2012 through 2021, 0.5 percent of the emission allowances; and

(B) for each of calendar years 2022 through 2050, 1.0 percent of the emission allowances.

(6) For the program for public health and climate change under subpart B of part 1 of subtitle C of title III of division A, and section 211 of division B, of the Clean Energy Jobs and American Power Act, 0.10 percent of the emission allowances for each of calendar years 2012 through 2050.

(7) For the Natural Resources Climate Change Adaptation Account under the program for climate change safeguards for natural resources conservation under section 370(a)(2) of division A, and section 212 of division B, of the Clean Energy Jobs and American Power Act, as described in the following table:

Natural Resources Climate Change Adaptation Account

Calendar Year	Percentage of allowances
2012	0.62
2013	0.62
2014	0.62
2015	0.62
2016	0.62
2017	0.62
2018	0.62
2019	0.62
2020	0.62
2021	0.62

Natural Resources Climate Change Adaptation Account—
Continued

2022	1.23
2023	1.23
2024	1.23
2025	1.23
2026	1.23
Each of calendar years 2027 through 2050	2.46

(8) For nuclear worker training under section 132 of division A, and section 213 of division B, of the Clean Energy Jobs and American Power Act—

(A) for each of calendar years 2012 and 2013, 0.5 percent of the emission allowances; and

(B) for each of calendar years 2014 and 2015, 0.05 percent of the emission allowances.

(9) In addition to the emission allowances reserved under subsection (d)(3), for the supplemental agriculture, abandoned mine land, renewable energy, and forestry greenhouse gas reduction and renewable energy program under section 155 of division A, and section 214 of division B, of the Clean Energy Jobs and American Power Act—

(A) for each of calendar years 2012 and 2013, 1.0 percent of the emission allowances; and

(B) for each of calendar years 2014 through 2016, 0.28 percent of the emission allowances.

(10) TRANSPORTATION GREENHOUSE GAS REDUCTION.*—In addition to the emission allowances reserved under subsection (d)(4), for the transportation greenhouse gas reduction program under sections 831 and 832 of this Act, and 215 of division B, of the Clean Energy Jobs and American Power Act, as described in the following table:*

Transportation greenhouse gas reduction

Calendar Year	Percentage of allowances
2012	2.21
2013	2.21
2014	1.35
2015	1.35
2016	1.05
2017	1.08
2018	0.98
2019	0.98
2020	0.95
2021	0.95
2022	0.94
2023	0.94
2024	0.94
2025	0.94

Transportation greenhouse gas reduction—Continued

2026	1.64
2027	2.52
2028	2.52
2029	2.52
Each of calendar years 2030 through 2050	2.17

(c) SUPPLEMENTAL REDUCTIONS.—

(1) IN GENERAL.—*Subject to subsection (d) and paragraphs (2) and (3), the Administrator shall allocate allowances for each vintage year to achieve supplemental reductions pursuant to section 753, as follows:*

(A) For each of calendar years 2012 through 2025, 5.0 percent of the emission allowances.

(B) For each of calendar years 2026 through 2030, 3.0 percent of the emission allowances.

(C) For each of calendar years 2031 through 2050, 2.0 percent of the emission allowances.

(2) ADJUSTMENT.—*The Administrator shall modify the allowances allocated under paragraph (1) as necessary to ensure the achievement of the annual supplemental emissions reduction objective for 2020 and the cumulative reduction objective through 2025 set forth in section 753(b)(1).*

(3) CARRYOVER.—*If the Administrator has not distributed all of the allowances allocated pursuant to this subsection for a given vintage year by the end of that year, all such undistributed emission allowances shall, in accordance with subsection (e), be exchanged for allowances from the following vintage year and treated as part of the allocation for supplemental reductions under this section for that later vintage year.*

(d) INITIAL RESERVATION OF ALLOWANCES.—

(1) IN GENERAL.—*Before allocating emission allowances under subsections (a) through (c) for each calendar year, the Administrator shall reserve from the total quantity of emission allowances established for the calendar year under section 721(a) the percentages of allowances specified in paragraphs (2) through (9), for use for the purposes described in those paragraphs.*

(2) DEFICIT REDUCTION.—*For auction pursuant to section 778 to ensure that this title does not contribute to the deficit for a calendar year, with proceeds of the auction to be deposited immediately upon receipt in the Deficit Reduction Fund established by section 783, the Administrator shall reserve—*

(A) for each of calendar years 2012 through 2029, 10 percent of the emission allowances;

(B) for each of calendar years 2030 through 2039, 22 percent of the emission allowances; and

(C) for each of calendar years 2040 through 2050, 25 percent of the emission allowances.

(3) SUPPLEMENTAL AGRICULTURE, ABANDONED MINE LAND, RENEWABLE ENERGY, AND FORESTRY.—*For the supplemental agriculture, abandoned mine land, renewable energy, and forestry greenhouse gas reduction and renewable energy program under section 155 of division A, and section 214 of division B, of the*

Clean Energy Jobs and American Power Act, the Administrator shall reserve 1.0 percent of the emission allowances for each of calendar years 2012 through 2050.

(4) TRANSPORTATION GREENHOUSE GAS REDUCTION.—*For the transportation greenhouse gas reduction program under sections 831 and 832 of this Act, and section 215 of division B of the Clean Energy Jobs and American Power Act, the Administrator shall reserve for each of calendar years 2012 through 2050, 1.0 percent of the emission allowances.*

(5) INDUSTRIAL EMISSIONS.—*For the program to ensure real reductions in industrial emissions under part F, the Administrator shall reserve 0.50 percent of the emission allowances for each of calendar years 2012 through 2050.*

(6) STATE AND LOCAL INVESTMENT IN ENERGY EFFICIENCY AND RENEWABLE ENERGY.—*For the program for State and local investment in energy efficiency and renewable energy under section 202 of division B of the Clean Energy Jobs and American Power Act, the Administrator shall reserve 0.50 percent of the emission allowances for each of calendar years 2012 through 2050.*

(7) ELECTRICITY CONSUMERS; SMALL LDCS.—*For distribution to small LDCs under the program for electricity consumers under section 772(e), the Administrator shall reserve—*

(A) for each of calendar years 2012 through 2025, 0.50 percent of the emission allowances;

(B) for calendar year 2026, 0.40 percent of the emission allowances;

(C) for calendar year 2027, 0.30 percent of the emission allowances;

(D) for calendar year 2028, 0.20 percent of the emission allowances; and

(E) for calendar year 2029, 0.10 percent of the emission allowances.

(8) INTERNATIONAL CLIMATE CHANGE ADAPTATION AND GLOBAL SECURITY PROGRAM.—*For the international climate change adaptation and global security program under section 324 of division A, and section 207 of division B, of the Clean Energy Jobs and American Power Act, the Administrator shall reserve 0.25 percent of the emission allowances for each of calendar years 2012 through 2026.*

(9) MARKET STABILITY RESERVE FUND.—*For the Market Stability Reserve Fund under section 726, the Administrator shall reserve—*

(A) for each of calendar years 2012 through 2019, 2.0 percent of the emission allowances; and

(B) for each of calendar years 2020 through 2050, 3.0 percent of the emission allowances.

(e) TREATMENT OF CARRYOVER ALLOWANCES.—

(1) IN GENERAL.—*If there are undistributed allowances from a vintage year for eligible industrial sectors pursuant to subsection (a)(5), deployment of carbon capture and sequestration technology pursuant to subsection (a)(6), or supplemental reductions pursuant to subsection (c), the Administrator shall—*

(A) use the undistributed allowances to increase for the same vintage year—

(i) the allocation of allowances to be auctioned, with the proceeds to be deposited immediately upon receipt in the Deficit Reduction Fund established by section 783;

(ii) the allocation of allowances for the program for climate change consumer refunds and low- and moderate-income consumers pursuant to subsection (b)(2); or

(iii) a combination the purposes described in clauses (i) and (ii); and

(B) except as provided in paragraph (2)—

(i) decrease by the same quantity for the following vintage year the allocation for the purpose for which the allocation was increased pursuant to subparagraph (A); and

(ii) increase by the same quantity for the following vintage year the allocation for the purpose for which the undistributed allowances were originally allocated.

(2) EXCESS UNDISTRIBUTED ALLOWANCES.—

(A) IN GENERAL.—*For each vintage year for which this subsection applies, the Administrator shall determine whether—*

(i) the total quantity of undistributed allowances for that vintage year that were allocated pursuant to paragraphs (5)(G) and (6)(B) of subsection (a), and subsection (c); exceeds

(ii) the total quantity of allowances allocated pursuant to subsections (b)(2) and (d)(2) for the following vintage year, decreased by the quantity of allowances for that following vintage year set aside for the reserve established by section 778(f).

(B) DETERMINATION OF EXCEEDANCE.—*If the Administrator determines under subparagraph (A) that the quantity described in subparagraph (A)(i) exceeds the quantity described in subparagraph (A)(ii)—*

(i) paragraph (1)(B)(ii) shall not apply; and

(ii) for each purpose described in paragraphs (5)(G) and (6)(B) of subsection (a), and subsection (c), for which undistributed allowances for a given vintage year were allocated, the Administrator shall increase the allocation for the following vintage year by the quantity that equals the product obtained by multiplying—

(iii) the number of undistributed allowances for that purpose; and

(iv) the quantity described in subparagraph (A)(ii) divided by the quantity described in subparagraph (A)(i).

(f) REMAINING ALLOWANCES.—*After making the allocations of emission allowances under subsections (a) through (e) for a calendar year, the Administrator shall allocate any emission allow-*

ances remaining from the total quantity of emission allowances established for the calendar year under section 721(a)—

(1) for each of calendar years 2012 through 2025, for auction in accordance with section 778 and deposit in the Deficit Reduction Fund established by section 783; and

(2) for each of calendar years 2026 through 2050, for the program for climate change consumer refunds and low- and moderate-income consumers pursuant to section 776.

SEC. 772. ELECTRICITY CONSUMERS.

(a) DEFINITIONS.*—In this section:*

(1) CHP SAVINGS.*—The term 'CHP savings' means—*

(A) CHP system savings from a combined heat and power system that commences operation after the date of enactment of this section; and

(B) the increase in CHP system savings from, at any time after the date of the enactment of this section, upgrading, replacing, expanding, or increasing the utilization of a combined heat and power system that commenced operation on or before the date of enactment of this section.

(2) CHP SYSTEM SAVINGS.*—The term 'CHP system savings' means the increment of electric output of a combined heat and power system that is attributable to the higher efficiency of the combined system (as compared to the efficiency of separate production of the electric and thermal outputs).*

(3) COAL-FUELED UNIT.*—The term 'coal-fueled unit' means a utility unit that derives at least 85 percent of its heat input from coal, petroleum coke, or any combination of those 2 fuels.*

(4) COST-EFFECTIVE.*—The term 'cost-effective', with respect to an energy efficiency program, means that the program meets the total resource cost test, which requires that the net present value of economic benefits over the life of the program, including avoided supply and delivery costs and deferred or avoided investments, is greater than the net present value of the economic costs over the life of the program, including program costs and incremental costs borne by the energy consumer.*

(5) ELECTRICITY LOCAL DISTRIBUTION COMPANY.*—The term 'electricity local distribution company' means an electric utility—*

(A) that has a legal, regulatory, or contractual obligation to deliver electricity directly to retail consumers in the United States, regardless of whether that entity or another entity sells the electricity as a commodity to those retail consumers; and

(B) the retail rates of which, except in the case of an electric cooperative, are regulated or set by—

(i) a State regulatory authority;

(ii) a State or political subdivision thereof (or an agency or instrumentality of, or corporation wholly owned by, either of the foregoing); or

(iii) an Indian tribe pursuant to tribal law.

(6) ELECTRICITY SAVINGS.*—The term 'electricity savings' means reductions in electricity consumption, relative to business-as-usual projections, achieved through measures implemented after the date of enactment of this section, limited to—*

(A) customer facility savings of electricity, adjusted to reflect any associated increase in fuel consumption at the facility;

(B) reductions in distribution system losses of electricity achieved by a retail electricity distributor, as compared to losses attributable to new or replacement distribution system equipment of average efficiency;

(C) CHP savings; and

(D) fuel cell savings.

(7) FUEL CELL.—*The term 'fuel cell' means a device that directly converts the chemical energy of a fuel and an oxidant into electricity by electrochemical processes occurring at separate electrodes in the device.*

(8) FUEL CELL SAVINGS.—*The term 'fuel cell savings' means the electricity saved by a fuel cell that is installed after the date of enactment of this section, or by upgrading a fuel cell that commenced operation on or before the date of enactment of this section, as a result of the greater efficiency with which the fuel cell transforms fuel into electricity as compared with sources of electricity delivered through the grid, provided that—*

(A) the fuel cell meets such requirements relating to efficiency and other operating characteristics as the Federal Energy Regulatory Commission may promulgate by regulation; and

(B) the net sales of electricity from the fuel cell to customers not consuming the thermal output from the fuel cell, if any, do not exceed 50 percent of the total annual electricity generation by the fuel cell.

(9) INDEPENDENT POWER PRODUCTION FACILITY.—*The term 'independent power production facility' means a facility—*

(A) that is used for the generation of electric energy, at least 80 percent of which is sold at wholesale; and

(B) the sales of the output of which are not subject to retail rate regulation or setting of retail rates by—

(i) a State regulatory authority;

(ii) a State or political subdivision thereof (or an agency or instrumentality of, or corporation wholly owned by, either of the foregoing);

(iii) an electric cooperative; or

(iv) an Indian tribe pursuant to tribal law.

(10) LONG-TERM CONTRACT GENERATOR.—

(A) IN GENERAL.—*The term 'long-term contract generator' means a qualifying small power production facility, a qualifying cogeneration facility), an independent power production facility, or a facility for the production of electric energy for sale to others that is owned and operated by an electric cooperative that is—*

(i) a covered entity; and

(ii) as of the date of enactment of this title—

(I) a facility with 1 or more sales or tolling agreements executed before March 1, 2007, that govern the facility's electricity sales and provide for sales at a price (whether a fixed price or a price formula) for electricity that does not allow for re-

covery of the costs of compliance with the limitation on greenhouse gas emissions under this title, provided that such agreements are not between entities that were affiliates of one another at the time at which the agreements were entered into; or

(II) a facility consisting of 1 or more cogeneration units that makes useful thermal energy available to an industrial or commercial process with 1 or more sales agreements executed before March 1, 2007, that govern the facility's useful thermal energy sales and provide for sales at a price (whether a fixed price or price formula) for useful thermal energy that does not allow for recovery of the costs of compliance with the limitation on greenhouse gas emissions under this title, provided that such agreements are not between entities that were affiliates of one another at the time at which the agreements were entered into.

(B) AFFILIATE.*—In this paragraph, the term 'affiliate', when used in relation to a covered entity, means another entity that directly or indirectly owned or controlled, was owned or controlled by, or that had 50 percent or more of its equity interests under common ownership or control with, the covered entity.*

(11) MERCHANT COAL UNIT.*—The term 'merchant coal unit' means a coal-fueled unit that—*

(A) is or is part of a covered entity;

(B) is not owned by a Federal, State, or regional agency or power authority; and

(C) generates electricity solely for sale to others, provided that all or a portion of such sales are made by a separate legal entity that—

(i) has a full or partial ownership or leasehold interest in the unit, as certified in accordance with such requirements as the Administrator shall prescribe; and

(ii) is not subject to retail rate regulation or setting of retail rates by—

(I) a State regulatory authority;

(II) a State or political subdivision thereof (or an agency or instrumentality of, or corporation wholly owned by, either of the foregoing);

(III) an electric cooperative; or

(IV) an Indian tribe pursuant to tribal law.

(12) MERCHANT COAL UNIT SALES.*—The term 'merchant coal unit sales' means sales to others of electricity generated by a merchant coal unit that are made by the owner or leaseholder described in paragraph (11)(C).*

(13) NEW COAL-FUELED UNIT.*—The term 'new coal-fueled unit' means a coal-fueled unit that commenced operation on or after January 1, 2009 and before January 1, 2013.*

(14) NEW MERCHANT COAL UNIT.*—The term 'new merchant coal unit' means a merchant coal unit—*

(A) that commenced operation on or after January 1, 2009 and before January 1, 2013; and

(B) the actual, on-site construction of which commenced prior to January 1, 2009.

(15) QUALIFIED HYDROPOWER.*—The term 'qualified hydropower' means—*

(A) energy produced from increased efficiency achieved, or additions of capacity made, on or after January 1, 1988, at a hydroelectric facility that was placed in service before that date and does not include additional energy generated as a result of operational changes not directly associated with efficiency improvements or capacity additions; or

(B) energy produced from generating capacity added to a dam on or after January 1, 1988, provided that the Federal Energy Regulatory Commission certifies that—

(i) the dam was placed in service before the date of the enactment of this section and was operated for flood control, navigation, or water supply purposes and was not producing hydroelectric power prior to the addition of such capacity;

(ii) the hydroelectric project installed on the dam is licensed (or is exempt from licensing) by the Federal Energy Regulatory Commission and is in compliance with the terms and conditions of the license or exemption, and with other applicable legal requirements for the protection of environmental quality, including applicable fish passage requirements; and

(iii) the hydroelectric project installed on the dam is operated so that the water surface elevation at any given location and time that would have occurred in the absence of the hydroelectric project is maintained, subject to any license or exemption requirements that require changes in water surface elevation for the purpose of improving the environmental quality of the affected waterway.

(16) QUALIFYING SMALL POWER PRODUCTION FACILITY; QUALIFYING COGENERATION FACILITY.*—The terms 'qualifying small power production facility' and 'qualifying cogeneration facility' have the meanings given those terms in section 3(17)(C) and 3(18)(B) of the Federal Power Act (16 U.S.C. 796(17)(C) and 796(18)(B)).*

(17) RENEWABLE ENERGY RESOURCE.*—The term 'renewable energy resource' means each of the following:*

(A) Wind energy.

(B) Solar energy.

(C) Geothermal energy.

(D) Renewable biomass.

(E) Biogas derived exclusively from renewable biomass.

(F) Biofuels derived exclusively from renewable biomass.

(G) Qualified hydropower.

(H) Marine and hydrokinetic renewable energy, as that term is defined in section 632 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17211).

(18) SMALL LDC.*—The term 'small LDC' means, for any given year, an electricity local distribution company that delivered*

less than 4,000,000 megawatt hours of electric energy directly to retail consumers in the preceding year.

(19) STATE REGULATORY AUTHORITY.—*The term 'State regulatory authority' has the meaning given that term in section 3(17) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2602(17)).*

(20) USEFUL THERMAL ENERGY.—*The term 'useful thermal energy' has the meaning given that term in section 371(7) of the Energy Policy and Conservation Act (42 U.S.C. 6341(7)).*

(b) ELECTRICITY LOCAL DISTRIBUTION COMPANIES.—

(1) DISTRIBUTION OF ALLOWANCES.—*The Administrator shall distribute to electricity local distribution companies for the benefit of retail ratepayers the quantity of emission allowances allocated for the following vintage year pursuant to section 771(a)(1)(A). Notwithstanding the preceding sentence, the Administrator shall withhold from distribution under this subsection a quantity of emission allowances equal to the lesser of 14.3 percent of the quantity of emission allowances allocated under section 771(a)(1) for the relevant vintage year, or 105 percent of the emission allowances for the relevant vintage year that the Administrator anticipates will be distributed to merchant coal units and to long-term contract generators, respectively, under subsections (c) and (d), on the condition that the Administrator shall be authorized to distribute future vintage year allowances available to long-term contract generators under subsection (d) in the case of a shortfall of allowances in any vintage year, subject to section 772(d)(2). If not required by subsections (c) and (d) to distribute all of these reserved allowances, the Administrator shall distribute any remaining emission allowances to electricity local distribution companies in accordance with this subsection.*

(2) DISTRIBUTION BASED ON EMISSIONS.—

(A) IN GENERAL.—*For each vintage year, 50 percent of the emission allowances available for distribution under paragraph (1), after reserving allowances for distribution under subsections (c) and (d), shall be distributed by the Administrator among individual electricity local distribution companies ratably based on the annual average carbon dioxide emissions attributable to generation of electricity delivered at retail by each such company during the base period determined under subparagraph (B).*

(B) BASE PERIOD.—

(i) VINTAGE YEARS 2012 AND 2013.—*For vintage years 2012 and 2013, an electricity local distribution company's base period shall be—*

(I) calendar years 2006 through 2008;

(II) any 3 consecutive calendar years between 1999 and 2008, inclusive, that such company selects, provided that the company timely informs the Administrator of such selection; or

(III) calendar year 2012, in the case of a local distribution company that—

(aa) is located outside of the Pacific Northwest (as defined in section 3 of the Pacific

Northwest Electric Power Planning and Conservation Act (16 U.S.C. 839a)), and purchased long-term excess Federal power and Hungry Horse Reservation power from the Bonneville Power Administration; and

(bb) will no longer have long-term excess Federal power or Hungry Horse Reservation power from the Bonneville Power Administration after October 1, 2011.

(ii) VINTAGE YEARS 2014 AND THEREAFTER.—*For vintage years 2014 and thereafter, the base period shall be—*

(I) the base period selected under clause (i); or

(II) calendar year 2012, in the case of—

(aa) an electricity local distribution company that owns, co-owns, or purchases through a power purchase agreement (whether directly or through a cooperative arrangement) a substantial portion of the electricity generated by a new coal-fueled unit, on the condition that such company timely informs the Administrator of its election to use 2012 as its base period; or

(bb) any small local distribution company that is located outside of the Pacific Northwest (as defined in section 3 of the Pacific Northwest Electric Power Planning and Conservation Act (16 U.S.C. 839a)), that purchased long-term excess Federal power and Hungry Horse Reservation power from the Bonneville Power Administration, and that will no longer have long-term excess Federal power or Hungry Horse Reservation power from the Bonneville Power Administration after October 1, 2011, on the condition that such company timely informs the Administrator of its election to use 2012 as its base period.

(C) DETERMINATION OF EMISSIONS.—

(i) DETERMINATION FOR 1999–2008.—*As part of the regulations promulgated pursuant to subsection (g), the Administrator, after consultation with the Energy Information Administration, shall determine the average amount of carbon dioxide emissions attributable to generation of electricity delivered at retail by each electricity local distribution company for each of the years 1999 through 2008, taking into account entities' electricity generation, electricity purchases, and electricity sales. In the case of any electricity local distribution company that owns, co-owns, or purchases through a power purchase agreement (whether directly or through a cooperative arrangement) a substantial portion of the electricity generated by, a coal-fueled unit that commenced operation after January 1, 2006, and before December 31, 2008, the Administrator shall adjust the*

emissions attributable to such company's retail deliveries in calendar years 2006 through 2008 to reflect the emissions that would have occurred if the relevant unit were in operation during the entirety of such 3-year period.

(ii) ADJUSTMENTS FOR NEW COAL-FUELED UNITS.—

(I) VINTAGE YEARS 2012 AND 2013.—*For purposes of emission allowance distributions for vintage years 2012 and 2013, in the case of any electricity local distribution company that owns, co-owns, or purchases through a power purchase agreement (whether directly or through a cooperative arrangement) a substantial portion of the electricity generated by, a new coal-fueled unit, the Administrator shall adjust the emissions attributable to such company's retail deliveries in the applicable base period to reflect the emissions that would have occurred if the new coal-fueled unit were in operation during such period.*

(II) VINTAGE YEAR 2014 AND THEREAFTER.—*Not later than necessary for use in making emission allowance distributions under this subsection for vintage year 2014, the Administrator shall, for any electricity local distribution company that owns, co-owns, or purchases through a power purchase agreement (whether directly or through a cooperative arrangement) a substantial portion of the electricity generated by a new coal-fueled unit and has selected calendar year 2012 as its base period pursuant to subparagraph (B)(ii)(II), determine the amount of carbon dioxide emissions attributable to generation of electricity delivered at retail by such company in calendar year 2012. If the relevant new coal-fueled unit was not yet operational by January 1, 2012, the Administrator shall adjust such determination to reflect the emissions that would have occurred if such unit were in operation for all of calendar year 2012.*

(iii) REQUIREMENTS.—*Determinations under this paragraph shall be as precise as practicable, taking into account the nature of data currently available and the nature of markets and regulation in effect in various regions of the country. The following requirements shall apply to such determinations:*

(I) The Administrator shall determine the amount of fossil fuel-based electricity delivered at retail by each electricity local distribution company, and shall use appropriate emission factors to calculate carbon dioxide emissions associated with the generation of such electricity.

(II) Where it is not practical to determine the precise fuel mix for the electricity delivered at retail by an individual electricity local distribution company, the Administrator may use the best

available data, including average data on a regional basis with reference to Regional Transmission Organizations or regional entities (as that term is defined in section 215(a)(7) of the Federal Power Act (16 U.S.C. 824o(a)(7)), to estimate fuel mix and emissions. Different methodologies may be applied in different regions if appropriate to obtain the most accurate estimate.

(3) DISTRIBUTION BASED ON DELIVERIES.—

(A) INITIAL FORMULA.—*Except as provided in subparagraph (B), for each vintage year, the Administrator shall distribute 50 percent of the emission allowances available for distribution under paragraph (1), after reserving allowances for distribution under subsections (c) and (d), among individual electricity local distribution companies ratably based on each electricity local distribution company's annual average retail electricity deliveries for calendar years 2006 through 2008, unless the owner or operator of the company selects 3 other consecutive years between 1999 and 2008, inclusive, and timely notifies the Administrator of its selection.*

(B) UPDATING.—*Prior to distributing 2015 vintage year emission allowances under this paragraph and at 3-year intervals thereafter, the Administrator shall update the distribution formula under this paragraph to reflect changes in each electricity local distribution company's service territory since the most recent formula was established. For each successive 3-year period, the Administrator shall distribute allowances ratably among individual electricity local distribution companies based on the product of—*

(i) each electricity local distribution company's average annual deliveries per customer during calendar years 2006 through 2008, or during the 3 alternative consecutive years selected by such company under subparagraph (A); and

(ii) the number of customers of such electricity local distribution company in the most recent year in which the formula is updated under this subparagraph.

(4) PROHIBITION AGAINST EXCESS DISTRIBUTIONS.—*The regulations promulgated under subsection (g) shall ensure that, notwithstanding paragraphs (2) and (3), no electricity local distribution company shall receive a greater quantity of allowances under this subsection than is necessary to offset any increased electricity costs to such company's retail ratepayers, including increased costs attributable to purchased power costs, due to enactment of this title. Any emission allowances withheld from distribution to an electricity local distribution company pursuant to this paragraph shall be distributed among all remaining electricity local distribution companies ratably based on emissions pursuant to paragraph (2).*

(5) USE OF ALLOWANCES.—

(A) RATEPAYER BENEFIT.—*Emission allowances distributed to an electricity local distribution company under this subsection shall be used exclusively for the benefit of retail*

ratepayers of such electricity local distribution company and may not be used to support electricity sales or deliveries to entities or persons other than such ratepayers.

(B) RATEPAYER CLASSES.*—In using emission allowances distributed under this subsection for the benefit of ratepayers, an electricity local distribution company shall ensure that ratepayer benefits are distributed—*

(i) among ratepayer classes ratably based on electricity deliveries to each class; and

(ii) equitably among individual ratepayers within each ratepayer class, including entities that receive emission allowances pursuant to part F.

(C) LIMITATION.*—In general, an electricity local distribution company shall not use the value of emission allowances distributed under this subsection to provide to any ratepayer a rebate that is based solely on the quantity of electricity delivered to such ratepayer. To the extent an electricity local distribution company uses the value of emission allowances distributed under this subsection to provide rebates, it shall, to the maximum extent practicable, provide such rebates with regard to the fixed portion of ratepayers' bills or as a fixed credit or rebate on electricity bills.*

(D) RESIDENTIAL AND INDUSTRIAL RATEPAYERS.*—Notwithstanding subparagraph (C), if compliance with the requirements of this title results (or would otherwise result) in an increase in electricity costs for residential or industrial retail ratepayers of any given electricity local distribution company (including entities that receive emission allowances pursuant to part F), such electricity local distribution company—*

(i) shall pass through to residential retail ratepayers as a class their ratable share (based on deliveries to each ratepayer class) of the value of the emission allowances that reduce electricity cost impacts on such ratepayers; and

(ii) shall pass through to industrial ratepayers as a class their ratable share (based on deliveries to each ratepayer class) of the value of the emission allowances that reduce electricity cost impacts on such ratepayers. The electricity local distribution company may do so based on the quantity of electricity delivered to individual industrial retail ratepayers.

(E) GUIDELINES.*—As part of the regulations promulgated under subsection (g), the Administrator shall, after consultation with State and tribal regulatory authorities, prescribe guidelines for the implementation of the requirements of this paragraph. Such guidelines shall include—*

(i) requirements to ensure that residential and industrial retail ratepayers (including entities that receive emission allowances under part F) receive their ratable share of the value of the allowances distributed to each electricity local distribution company pursuant to this subsection; and

(ii) requirements for measurement, verification, reporting, and approval of methods used to assure the use of allowance values to benefit retail ratepayers.

(6) REGULATORY PROCEEDINGS.—

(A) REQUIREMENT.—*No electricity local distribution company shall be eligible to receive emission allowances under this subsection or subsection (e) unless the State regulatory authority with authority over such company's retail rates, or the entity with authority to regulate or set retail electricity rates of an electricity local distribution company not regulated by a State regulatory authority, has—*

(i) after public notice and an opportunity for comment, promulgated a regulation or completed a rate proceeding (or the equivalent, in the case of a ratemaking entity other than a State regulatory authority) that provides for the full implementation of the requirements of paragraph (5) of this subsection and the requirements of subsection (e); and

(ii) made available to the Administrator and the public a report describing, in adequate detail, the manner in which the requirements of paragraph (5) and the requirements of subsection (e) will be implemented.

(B) UPDATING.—*The Administrator shall require, as a condition of continued receipt of emission allowances under this subsection by an electricity local distribution company, that a new regulation be promulgated or rate proceeding be completed , after public notice and an opportunity for comment, and a new report be made available to the Administrator and the public, pursuant to subparagraph (A), not less frequently than every 5 years.*

(7) PLANS AND REPORTING.—

(A) REGULATIONS.—*As part of the regulations promulgated under subsection (g), the Administrator shall prescribe requirements governing plans and reports to be submitted in accordance with this paragraph.*

(B) PLANS.—*Not later than April 30 of 2011 and every 5 years thereafter through 2026, each electricity local distribution company shall submit to the Administrator a plan, approved by the State regulatory authority or other entity charged with regulating tor setting the retail rates of such company, describing such company's plans for the disposition of the value of emission allowances to be received pursuant to this subsection and subsection (e), in accordance with the requirements of this subsection and subsection (e). Such plan shall include a description of the manner in which the company will provide to industrial retail ratepayers (including entities that receive emission allowances under part F) their ratable share of the value of such allowances.*

(C) REPORTS.—*Not later than June 30, 2013, and each calendar year thereafter through 2031, each electricity local distribution company shall submit a report to the Administrator, and to the relevant State regulatory authority or other entity charged with regulating or setting the retail*

electricity rates of such company, describing the disposition of the value of any emission allowances received by such company in the prior calendar year pursuant to this subsection and subsection (e), including—

(i) a description of sales, transfer, exchange, or use by the company for compliance with obligations under this title, of any such emission allowances;

(ii) the monetary value received by the company, whether in money or in some other form, from the sale, transfer, or exchange of any such emission allowances;

(iii) the manner in which the company's disposition of any such emission allowances complies with the requirements of this subsection and of subsection (e), including each of the requirements of paragraph (5) of this subsection, including the requirement that industrial retail ratepayers (including entities that receive emission allowances under part F) receive their ratable share of the value of such allowances; and

(iv) such other information as the Administrator may require pursuant to subparagraph (A).

(D) PUBLICATION.—*The Administrator shall make available to the public all plans and reports submitted under this subsection, including by publishing such plans and reports on the Internet.*

(8) ADMINISTRATOR AUDIT REPORTS.—

(A) IN GENERAL.—*Each year, the Administrator shall audit a representative sample of electricity local distribution companies to ensure that emission allowances distributed under this subsection have been used exclusively for the benefit of retail ratepayers and that such companies are complying with the requirements of this subsection and of subsection (e), including the requirement that residential and industrial retail ratepayers (including entities that receive emission allowances under part F) receive their ratable share of the value of such allowances. The Administrator shall assess the degree to which electric local distribution companies have maintained a marginal electric price signal while protecting consumers on total cost using the value of emissions allowances. In selecting companies for audit, the Administrator shall take into account any credible evidence of noncompliance with such requirements. The Administrator shall make available to the public a report describing the results of each such audit, including by publishing such report on the Internet.*

(B) GAO AUDIT REPORT.—*Not later than April 30, 2015, and every 3 years thereafter through 2026, the Comptroller General of the United States, incorporating results from the Administrators' audit report and other relevant information including distribution company reports, shall conduct an in-depth evaluation and make available to the public a report on the investments made pursuant to paragraph (5). Said report shall be made available to the State regulatory authority, or the entity with authority to regulate or set retail electricity rates in the case of an electricity distribution*

company that is not regulated by a State regulatory authority, and shall include a description of how the distribution companies in the audit meet or fail to meet the requirement of paragraph (5), including for investments made in cost-effective end-use energy efficiency programs, the lifetime and annual energy saving benefits, and capacity benefits of said programs.

(C) ADMINISTRATOR COST CONTAINMENT REPORT.—*Not later than April 30, 2015 and every 3 years thereafter through 2026, the Administrator shall transmit a report to Congress containing an evaluation of the disposition of the value of emission allowances received pursuant to this subsection and subsection (e) and recommendations of ways to more effectively direct the value of allowances to reduce costs for consumers, contain the overall costs of the greenhouse gas emissions reduction program, and meet the pollution reduction targets of the Act. The Administrator shall make available to the public such report, including by publishing such report on the Internet.*

(9) ENFORCEMENT.—*A violation of any requirement of this subsection or of subsection (e), irrespective of approval by a State regulatory authority, shall be a violation of this Act. Each emission allowance the value of which is used in violation of the requirements of this subsection or of subsection (e) shall be a separate violation.*

(c) MERCHANT COAL UNITS.—

(1) QUALIFYING EMISSIONS.—*The qualifying emissions for a merchant coal unit for a given calendar year shall be the product of the number of megawatt hours of merchant coal unit sales generated by such unit in such calendar year and the average carbon dioxide emissions per megawatt hour generated by such unit during the base period under paragraph (2), provided that the number of megawatt hours in a given calendar year for purposes of such calculation shall be reduced in proportion to the portion of such unit's carbon dioxide emissions that are either—*

(A) captured and sequestered in such calendar year; or

(B) attributable to the combustion or gasification of biomass, to the extent that the owner or operator of the unit is not required to hold emission allowances for such emissions.

(2) BASE PERIOD.—*For purposes of this subsection, the base period for a merchant coal unit shall be—*

(A) calendar years 2006 through 2008; or

(B) in the case of a new merchant coal unit—

(i) the first full calendar year of operation of such unit, if such unit commences operation before January 1, 2012;

(ii) calendar year 2012, if such unit commences operation on or after January 1, 2012, and before October 1, 2012; or

(iii) calendar year 2013, if such unit commences operation on or after October 1, 2012, and before January 1, 2013.

(3) PHASE-DOWN SCHEDULE.—*The Administrator shall identify an annual phase-down factor, applicable to distributions to merchant coal units for each of vintage years 2012 through 2029, that corresponds to the overall decline in the amount of emission allowances allocated to the electricity sector in such years pursuant to section 771(a)(1). Such factor shall—*

(A) for vintage year 2012, be equal to 1.0;

(B) for each of vintage years 2013 through 2029, correspond to the quotient of—

(i) the quantity of emission allowances allocated under section 771(a)(1) for such vintage year; divided by

(ii) the quantity of emission allowances allocated under section 771(a)(1) for vintage year 2012.

(4) DISTRIBUTION OF EMISSION ALLOWANCES.—*Not later than March 1 of 2013 and each calendar year through 2030, the Administrator shall distribute emission allowances of the preceding vintage year to the owner or operator of each merchant coal unit described in subsection (a)(11)(C) in an amount equal to the product of—*

(A) 0.5;

(B) the qualifying emissions for such merchant coal unit for the preceding year, as determined under paragraph (1); and

(C) the phase-down factor for the preceding calendar year, as identified under paragraph (3).

(5) ADJUSTMENT.—

(A) STUDY.—*Not later than 5 years after the date of enactment of the Clean Energy Jobs and American Power Act, the Administrator, in consultation with the Federal Energy Regulatory Commission, shall issue a study to determine whether the allocation formula under paragraph (3) is resulting in windfall profits to merchant coal generators or substantially disparate treatment of merchant coal generators operating in different markets or regions.*

(B) REGULATION.—*If the Administrator, in consultation with the Federal Energy Regulatory Commission, makes an affirmative finding of windfall profits or disparate treatment under subparagraph (A), the Administrator shall, not later than 18 months after the completion of the study described in subparagraph (A), promulgate regulations providing for the adjustment of the allocation formula under paragraph (3) to mitigate, to the extent practicable, such windfall profits, if any, and such disparate treatment, if any.*

(6) LIMITATION ON ALLOWANCES.—*Notwithstanding paragraph (4) or (5), for each vintage year the Administrator shall distribute under this subsection no more than 10 percent of the total quantity of emission allowances available for such vintage year for distribution to the electricity sector under section 771(a)(1). If the quantity of emission allowances that would otherwise be distributed pursuant to paragraph (4) or (5) for any vintage year would exceed such limit, the Administrator shall distribute 10 percent of the total emission allowances available*

for distribution under section 771(a)(1) for such vintage year ratably among merchant coal generators based on the applicable formula under paragraph (4) or (5).

(7) ELIGIBILITY.—*The owner or operator of a merchant coal unit shall not be eligible to receive emission allowances under this subsection for any vintage year for which such owner or operator has elected to receive emission allowances for the same unit under subsection (d).*

(d) LONG-TERM CONTRACT GENERATORS.—

(1) DISTRIBUTION.—*Not later than March 1, 2013, and each calendar year through 2030, the Administrator shall distribute to the owner or operator of each long-term contract generator a quantity of emission allowances of the preceding vintage year that is equal to the sum of—*

(A) the number of tons of carbon dioxide emitted as a result of a qualifying electricity sales agreement referred to in subsection (a)(10)(B)(i); and

(B) the incremental number of tons of carbon dioxide emitted solely as a result of a qualifying thermal sales agreement referred to in subsection (a)(10)(B)(ii), provided that in no event shall the Administrator distribute more than 1 emission allowance for the same ton of emissions.

(2) LIMITATION ON ALLOWANCES.—

(A) IN GENERAL.—*Notwithstanding paragraph (1), for each vintage year the Administrator shall distribute under this subsection no more than 4.3 percent of the total quantity of emission allowances available for such vintage year for distribution to the electricity sector under section 771(a)(1).*

(B) FUTURE VINTAGE YEAR ALLOWANCES.—

(i) IN GENERAL.—*To the extent that any quantity of allowances that would otherwise be distributed pursuant to paragraph (1) would exceed 4.3 percent in any vintage year, the Administrator shall distribute future vintage year allowances reserved for long-term contract generators under this section to satisfy any such shortfall in available allowances, subject to projections by the Administrator of required allowance needs for long-term contract generators in future vintage years.*

(ii) MAINTENANCE OF YEAR.—*Future vintage year allowances distributed pursuant to this subsection shall maintain the future vintage year assigned to those allowances.*

(C) SHORTFALL.—*If the quantity of emission allowances that would otherwise be distributed pursuant to paragraph (1) for any vintage year would result in a shortfall based on a consideration of available allowances under this subsection over the entire allocation period, as determined by the Administrator, the Administrator shall distribute the emission allowances available for distribution under section 771(a)(1) for such vintage year ratably among long-term contract generators in accordance with paragraph (1).*

(3) ELIGIBILITY.—

(A) FACILITY ELIGIBILITY.—*The owner or operator of a facility shall cease to be eligible to receive emission allowances under this subsection upon the earliest date on which the facility no longer meets each and every element of the definition of a long-term contract generator under subsection (a)(10).*

(B) CONTRACT ELIGIBILITY.—*The owner or operator of a facility shall cease to be eligible to receive emission allowances under this subsection based on an electricity or thermal sales agreement referred to in subsection (a)(10)(B) upon the earliest date that such agreement—*

(i) expires;

(ii) is terminated; or

(iii) is amended in any way that changes the location of the facility, the price (whether a fixed price or price formula) for electricity or thermal energy sold under such agreement, the quantity of electricity or thermal energy sold under the agreement, or the expiration or termination date of the agreement.

(4) DEMONSTRATION OF ELIGIBILITY.—*To be eligible to receive allowance distributions under this subsection, the owner or operator of a long-term contract generator shall submit each of the following in writing to the Administrator within 180 days after the date of enactment of this title, and not later than September 30 of each vintage year for which such generator wishes to receive emission allowances:*

(A) A certificate of representation described in section 700(15).

(B) An identification of each owner and each operator of the facility.

(C) An identification of the units at the facility and the location of the facility.

(D) A written certification by the designated representative that the facility meets all the requirements of the definition of a long-term contract generator.

(E) The expiration date of each qualifying electricity or thermal sales agreement referred to in subsection (a)(10)(B).

(F) A copy of each qualifying electricity or thermal sales agreement referred to in subsection (a)(10)(B).

(5) NOTIFICATION.—*Not later than 30 days after, in accordance with paragraph (3), a facility or an agreement ceases to meet the eligibility requirements for distribution of emission allowances pursuant to this subsection, the designated representative of such facility shall notify the Administrator in writing when, and on what basis, such facility or agreement ceased to meet such requirements.*

(e) SMALL LDCs.—

(1) DISTRIBUTION.—*The Administrator shall, in accordance with this subsection, distribute emission allowances allocated pursuant to section 771(a)(1)(B) for the following vintage year. Such allowances shall be distributed ratably among small LDCs based on historic emissions in accordance with the same measure of such emissions applied to each such small LDC for the relevant vintage year under subsection (b)(2) of this section.*

(2) USES.—*A small LDC receiving allowances under this section shall use such allowances exclusively for the following purposes:*

(A) Cost-effective programs to achieve electricity savings, provided that such savings shall not be transferred or used for compliance with any renewable electricity standard established under the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.).

(B) Deployment of technologies to generate electricity from renewable energy resources, provided that any Federal renewable electricity credits issued based on generation supported under this section shall be submitted to the Federal Energy Regulatory Commission for voluntary retirement and shall not be used for compliance with the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.).

(C) Assistance programs to reduce electricity costs for low-income residential ratepayers of such small LDC, provided that such assistance is made available equitably to all residential ratepayers below a certain income level, which shall not be higher than 200 percent of the poverty line (as that term is defined in section 673(2) of the Community Services Block Grant Act (42 U.S.C. 9902(2)).

(D) Costs of compliance associated with the enactment of this title.

(3) REQUIREMENTS.—*As part of the regulations promulgated under subsection (g), the Administrator shall prescribe—*

(A) after consultation with the Federal Energy Regulatory Commission, requirements to ensure that programs and projects under paragraph (2)(A) and (B) are consistent with the standards established by, and effectively supplement electricity savings and generation of electricity from renewable energy resources achieved by, the Combined Efficiency and Renewable Electricity Standard established by law;

(B) eligibility criteria and guidelines for consumer assistance programs for low-income residential ratepayers under paragraph (2)(C); and

(C) such other requirements as the Administrator determines appropriate to ensure compliance with the requirements of this subsection.

(4) REPORTING.—*Reports submitted under subsection (b)(7) shall include, in accordance with such requirements as the Administrator may prescribe—*

(A) a description of any facilities deployed under paragraph (2)(A), the quantity of resulting electricity generation from renewable energy resources;

(B) an assessment demonstrating the cost-effectiveness of, and electricity savings achieved by, programs supported under paragraph (2)(B); and

(C) a description of assistance provided to low-income retail ratepayers under paragraph (2)(C).

(f) RURAL ELECTRIC COOPERATIVES, CONSUMER, OR PUBLICLY OWNED SMALL LDCS.—

(1) DISTRIBUTION.—

(A) IN GENERAL.—*The Administrator shall, in accordance with this subsection, distribute emission allowances allocated pursuant to section 771(d)(7) for the following vintage year.*

(B) METHOD.—*Allowances described in subparagraph (A) shall be distributed ratably, among rural electric cooperatives and consumer-owned or publicly owned electricity local distribution companies that meet the definition of the term 'small LDC' based on historic emissions, in accordance with the same measure of those emissions applied to each such rural electric cooperative for the relevant vintage year under subsection (b)(2).*

(2) USES.—*A small LDC receiving allowances under this section shall use the allowances only for—*

(A) cost-effective programs to achieve electricity savings, on the condition that such savings shall not be transferred or used for compliance with any renewable electricity standard established under the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.);

(B) deployment of technologies to generate electricity from renewable energy resources, on the condition that any Federal renewable electricity credits issued based on generation supported under this section shall—

(i) be submitted to the Federal Energy Regulatory Commission for voluntary retirement; and

(ii) not be used for compliance with the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2601 et seq.); and

(C) assistance programs to reduce electricity costs for low-income residential ratepayers of the small LDC, on the condition that the assistance is made available equitably to all residential ratepayers below a certain income level, which shall not be higher than 200 percent of the poverty line (as defined in section 673 of the Community Services Block Grant Act (42 U.S.C. 9902).

(g) REGULATIONS.—*Not later than 2 years after the date of enactment of this title, the Administrator, in consultation with the Federal Energy Regulatory Commission, shall promulgate regulations to implement the requirements of this section.*

SEC. 773. NATURAL GAS CONSUMERS.

(a) DEFINITION.—*For purposes of this section, the term 'cost-effective', with respect to an energy efficiency program, means that the program meets the Total Resource Cost Test, which requires that the net present value of economic benefits over the life of the program, including avoided supply and delivery costs and deferred or avoided investments, is greater than the net present value of the economic costs over the life of the program, including program costs and incremental costs borne by the energy consumer.*

(b) ALLOCATION.—*Not later than June 30, 2015, and each calendar year thereafter through 2028, the Administrator shall distribute to natural gas local distribution companies for the benefit of retail ratepayers the quantity of emission allowances allocated for the following vintage year pursuant to section 771(a)(2). Such allow-*

ances shall be distributed among local natural gas distribution companies based on the following formula:

(1) INITIAL FORMULA.—*Except as provided in paragraph (2), for each vintage year, the Administrator shall distribute emission allowances among natural gas local distribution companies on a pro rata basis based on each such company's annual average retail natural gas deliveries for 2006 through 2008, unless the owner or operator of the company selects 3 other consecutive years between 1999 and 2008, inclusive, and timely notifies the Administrator of its selection.*

(2) UPDATING.—*Prior to distributing 2019 vintage emission allowances and at 3-year intervals thereafter, the Administrator shall update the distribution formula under this subsection to reflect changes in each natural gas local distribution company's service territory since the most recent formula was established. For each successive 3-year period, the Administrator shall distribute allowances on a pro rata basis among natural gas local distribution companies based on the product of—*

(A) each natural gas local distribution company's average annual natural gas deliveries per customer during calendar years 2006 through 2008, or during the 3 alternative consecutive years selected by such company under paragraph (1); and

(B) the number of customers of such natural gas local distribution company in the most recent year in which the formula is updated under this paragraph.

(c) USE OF ALLOWANCES.—

(1) RATEPAYER BENEFIT.—*Emission allowances distributed to a natural gas local distribution company under this section shall be used exclusively for the benefit of retail ratepayers of such natural gas local distribution company and may not be used to support natural gas sales or deliveries to entities or persons other than such ratepayers.*

(2) RATEPAYER CLASSES.—*In using emission allowances distributed under this section for the benefit of ratepayers, a natural gas local distribution company shall ensure that ratepayer benefits are distributed—*

(A) among ratepayer classes on a pro rata basis based on natural gas deliveries to each class; and

(B) equitably among individual ratepayers within each ratepayer class.

(3) LIMITATION.—*A natural gas local distribution company shall not use the value of emission allowances distributed under this section to provide to any ratepayer a rebate that is based solely on the quantity of natural gas delivered to such ratepayer. To the extent a natural gas local distribution company uses the value of emission allowances distributed under this section to provide rebates, it shall, to the maximum extent practicable, provide such rebates with regard to the fixed portion of ratepayers' bills or as a fixed creditor rebate on natural gas bills.*

(4) ENERGY EFFICIENCY PROGRAMS.—*The value of no less than one-third of the emission allowances distributed to natural gas local distribution companies pursuant to this section in any*

calendar year shall be used for cost-effective energy efficiency programs for natural gas consumers. Such programs must be authorized and overseen by the State regulatory authority, or by the entity with regulatory authority over retail natural gas rates in the case of a natural gas local distribution company that is not regulated by a State regulatory authority.

(5) CERTAIN INTRACOMPANY DELIVERIES.—*If a natural gas local distribution company makes an intracompany delivery of natural gas to a customer that is not a covered entity, for which such company is required to hold emission allowances under section 722, such customer shall, for purposes of this section, be considered to be a retail ratepayer and a member of a ratepayer class to be determined by the relevant State regulatory authority (or other entity with authority to regulate or set natural gas rates, in the case of a company not regulated by a State regulatory authority).*

(6) GUIDELINES.—*As part of the regulations promulgated under subsection (h), the Administrator shall prescribe specific guidelines for the implementation of the requirements of this subsection.*

(d) REGULATORY PROCEEDINGS.—

(1) REQUIREMENT.—*No natural gas local distribution company shall be eligible to receive emission allowances under this section unless the State regulatory authority with authority over such company, or the entity with authority to regulate retail rates of a natural gas local distribution company not regulated by a State regulatory authority, has—*

(A) promulgated a regulation or completed a rate proceeding (or the equivalent, in the case of a ratemaking entity other than a State regulatory authority) that provides for the full implementation of the requirements of subsection (c); and

(B) made available to the Administrator and the public a report describing, in adequate detail, the manner in which the requirements of subsection (c) will be implemented.

(2) UPDATING.—*The Administrator shall require, as a condition of continued receipt of emission allowances under this section, that a new regulation be promulgated or rate proceeding be completed, and a new report be made available to the Administrator and the public, pursuant to paragraph (1), not less frequently than every 5 years.*

(e) PLANS AND REPORTING.—

(1) REGULATIONS.—*As part of the regulations promulgated under subsection (h), the Administrator shall prescribe requirements governing plans and reports to be submitted in accordance with this subsection.*

(2) PLANS.—*Not later than April 30, 2015, and every 5 years thereafter through 2025, each natural gas local distribution company shall submit to the Administrator a plan, approved by the State regulatory authority or other entity charged with regulating the retail rates of such company, describing such company's plans for the disposition of the value of emission allow-*

ances to be received pursuant to this section, in accordance with the requirements of this section.

(3) REPORTS.—*Not later than June 30, 2017, and each calendar year thereafter through 2031, each natural gas local distribution company shall submit a report to the Administrator, approved by the relevant State regulatory authority or other entity charged with regulating the retail natural gas rates of such company, describing the disposition of the value of any emission allowances received by such company in the prior calendar year pursuant to this subsection, including—*

(A) a description of sales, transfer, exchange, or use by the company for compliance with obligations under this title, of any such emission allowances;

(B) the monetary value received by the company, whether in money or in some other form, from the sale, transfer, or exchange of emission allowances received by the company under this section;

(C) the manner in which the company's disposition of emission allowances received under this subsection complies with the requirements of this section, including each of the requirements of subsection (c);

(D) the cost-effectiveness of, and energy savings achieved by, energy efficiency programs supported through such emission allowances; and

(E) such other information as the Administrator may require pursuant to paragraph (1).

(4) PUBLICATION.—*The Administrator shall make available to the public all plans and reports submitted by natural gas local distribution companies under this subsection, including by publishing such plans and reports on the Internet.*

(f) AUDITING.—

(1) ADMINISTRATOR AUDIT REPORT.—*Each year, the Administrator shall audit a significant representative sample of natural gas local distribution companies to ensure that emission allowances distributed under this section have been used exclusively for the benefit of retail ratepayers and that such companies are complying with the requirements of this section. In selecting companies for audit, the Administrator shall take into account any credible evidence of noncompliance with such requirements. The Administrator shall make available to the public a report describing the results of each such audit, including by publishing such report on the Internet.*

(2) GAO AUDIT REPORT.—*Not later April 30, 2015 and every 3 years thereafter through April 30, 2026, the Comptroller General of the United States, incorporating results from the Administrators' audit report and other relevant information including distribution company reports, shall conduct an in-depth evaluation and make available to the public a report on the investments made pursuant to subsection (c). Said report shall be made available to the State regulatory authority, or the entity with authority to regulate or set retail natural gas rates in the case of a natural gas distribution company that is not regulated by a State regulatory authority, and shall include a description how the distribution companies in the audit meet or fail to meet*

the requirement of subsection (c), including for investments made in cost-effective end-use energy efficiency programs, the lifetime and annual energy saving benefits, and capacity benefits of said programs.

(3) ADMINISTRATOR COST CONTAINMENT REPORT.*—Not later April 30, 2015, and every 3 years thereafter through April 30, 2026, the Administrator shall transmit a report to Congress containing an evaluation of the disposition of the value of emission allowances received pursuant to this subsection and recommendations of ways to more effectively direct the value of allowances to reduce costs for consumers, contain the overall costs of the greenhouse gas emissions reduction program, and meet the pollution reduction targets of the Act. The Administrator shall make available to the public such report, including by publishing such report on the Internet.*

(g) ENFORCEMENT.*—A violation of any requirement of this section, irrespective of approval by a State regulatory authority, shall be a violation of this Act. Each emission allowance the value of which is used in violation of the requirements of this section shall be a separate violation.*

(h) REGULATIONS.*—Not later than January 1, 2014, the Administrator, in consultation with the Federal Energy Regulatory Commission, shall promulgate regulations to implement the requirements of this section.*

SEC. 774. HOME HEATING OIL AND PROPANE CONSUMERS.

(a) DEFINITIONS.*—For purposes of this section:*

(1) CARBON CONTENT.*—The term 'carbon content' means the amount of carbon dioxide that would be emitted as a result of the combustion of a fuel.*

(2) COST-EFFECTIVE.*—The term 'cost-effective' has the meaning given that term in section 773(a).*

(b) ALLOCATION.*—The Administrator shall distribute among the States, in accordance with this section, the quantity of emission allowances allocated pursuant to section 771(a)(3). The Administrator shall distribute a percentage of such allowances determined by the Administrator, after consultation with the Secretary of the Interior, pursuant to subsection (f).*

(c) DISTRIBUTION AMONG STATES.*—The Administrator shall distribute emission allowances among the States under this section each year on a pro rata basis based on the ratio of—*

(1) the carbon content of home heating oil and propane sold to consumers within each State in the preceding year for residential or commercial uses; to

(2) the carbon content of home heating oil and propane sold to consumers within the United States in the preceding year for residential or commercial uses.

(d) USE OF ALLOWANCES.*—*

(1) IN GENERAL.*—States shall use emission allowances distributed under this section exclusively for the benefit of consumers of home heating oil or propane for residential or commercial purposes. Such proceeds shall be used exclusively for—*

(A) cost-effective energy efficiency programs for consumers that use home heating oil or propane for residential or commercial purposes; or

(B) rebates or other direct financial assistance programs for consumers of home heating oil or propane used for residential or commercial purposes.

(2) ADMINISTRATION AND DELIVERY MECHANISMS.*—In administering programs supported by this section, States shall—*

(A) use no less than 50 percent of the value of emission allowances received under this section for cost-effective energy efficiency programs to reduce consumers' overall fuel costs;

(B) to the extent practicable, deliver consumer support under this section through existing energy efficiency and consumer energy assistance programs or delivery mechanisms, including, where appropriate, programs or mechanisms administered by parties other than the State; and

(C) seek to coordinate the administration and delivery of energy efficiency and consumer energy assistance programs supported under this section, with one another and with existing programs for various fuel types, so as to deliver comprehensive, fuel-blind, coordinated programs to consumers.

(e) REPORTING.*—Each State receiving emission allowances under this section shall submit to the Administrator, within 12 months of each receipt of such allowances, a report, in accordance with such requirements as the Administrator may prescribe, that—*

(1) describes the State's use of emission allowances distributed under this section, including a description of the energy efficiency and consumer assistance programs supported with such allowances;

(2) demonstrates the cost-effectiveness of, and the energy savings achieved by, energy efficiency programs supported under this section; and

(3) includes a report prepared by an independent third party, in accordance with such regulations as the Administrator may promulgate, evaluating the performance of the energy efficiency and consumer assistance programs supported under this section.

(f) DISTRIBUTION TO INDIAN TRIBES.*—Not later than 18 months after the date of enactment of this title, the Administrator shall, in consultation with the Secretary of the Interior and Indian tribes, promulgate regulations establishing a program to distribute the emission allowances made available to Indian tribes under this section.*

(g) ENFORCEMENT.—

(1) IN GENERAL.*—If the Administrator determines that a State or Indian tribe is not in compliance with this section, the Administrator may withhold a portion of the emission allowances, the quantity of which is equal to up to twice the quantity of the allowances that the State or Indian tribe failed to use in accordance with the requirements of this section, that such State or Indian tribe would otherwise be eligible to receive under this section in later years.*

(2) WITHHELD ALLOWANCES.—

(A) STATES.*—Allowances withheld from States pursuant to this subsection shall be distributed among the remaining*

States on a pro rata basis in accordance with the formula in subsection (c).

(B) INDIAN TRIBES.*—Allowances withheld from Indian tribes pursuant to this subsection shall be distributed among the remaining Indian tribes on a pro rata basis in accordance with the program established under subsection (f).*

SEC. 775. DOMESTIC FUEL PRODUCTION.

(a) PURPOSE.*—The purpose of this section is to provide emission allowance rebates to petroleum refineries in the United States in a manner that promotes energy efficiency and a reduction in greenhouse gas emissions at such facilities.*

(b) DEFINITIONS.*—In this section:*

(1) EMISSIONS.*—The term 'emissions' includes direct emissions from fuel combustion, process emissions, and indirect emissions from the generation of electricity, steam, and hydrogen used to produce the output of a petroleum refinery or the petroleum refinery sector.*

(2) PETROLEUM REFINERY.*—The term 'petroleum refinery' means a facility classified under code 324110 of the North American Industrial Classification System of 2002.*

(3) SMALL BUSINESS REFINER.*—The term 'small business refiner' means a refiner that meets the applicable Federal refinery capacity and employee limitations criteria described in section 45H(c)(1) of the Internal Revenue Code of 1986 (as in effect on the date of enactment of this section and without regard to section 45H(d)). Eligibility of a small business refiner under this paragraph shall not be recalculated or disallowed on account of (i) its merger with another small business refiner or refiners after December 31, 2002 or (ii) its acquisition of another small business refiner (or refinery of such refiner) after December 31, 2002.*

(c) DISTRIBUTION OF ALLOWANCES.*—The Administrator shall distribute allowances pursuant to this section to owners and operators of petroleum refineries, including small business refiners, in the United States.*

(d) DISTRIBUTION SCHEDULE.*—The Administrator shall distribute emission allowances pursuant to the regulations issued under subsection (e) for each vintage year no later than October 31 of the preceding calendar year.*

(e) REGULATIONS.*—*

(1) IN GENERAL.*—Not later than 3 years after the date of enactment of this title, the Administrator, in consultation with the Administrator of the Energy Information Administration, shall promulgate regulations in accordance with the purpose of this section that establish separate formulas for distribution of emission allowances provided to—*

(A) petroleum refineries pursuant to section 771(a)(4)(A); and

(B) small business refiners pursuant to section 771(a)(4)(B).

(2) CONSIDERATIONS.*—In establishing the formulas under paragraph (1), the Administrator shall consider—*

(A) the relative complexity of refinery processes and appropriate mechanisms to take energy efficiency and greenhouse gas reductions into account;

(B) direct emissions from fuel combustion;

(C) process emissions;

(D) indirect emissions for the generation of electricity, steam, and hydrogen used to produce the output of a petroleum refinery; and

(E) emissions from the combustion of products produced at a petroleum refinery or by the petroleum refinery sector.

(3) EXCESS DISTRIBUTION.*—If the electricity provider for a petroleum refinery received a free allocation of emission allowances pursuant to section 771(a)(1), the Administrator shall take the free allocation into account when establishing the applicable formula under this subsection to avoid rebates to a petroleum refinery for costs that the Administrator determines were not incurred by the petroleum refinery because the allowances were—*

(A) freely allocated to the electricity provider of the petroleum refinery; and

(B) used for the benefit of the petroleum refinery.

SEC. 776. CONSUMER PROTECTION.

(a) CONSUMER REBATES.*—*

(1) ESTABLISHMENT OF FUND.*—There is established in the Treasury a separate account, to be known as the 'Consumer Rebate Fund'.*

(2) AVAILABILITY OF AMOUNTS.*—All amounts deposited in the Consumer Rebate Fund shall be available without further appropriation or fiscal year limitation.*

(3) DISTRIBUTION OF AMOUNTS.*—Beginning in 2026, for each year after deposits are made in the Consumer Rebate Fund pursuant to section 771(b)(2)(A), the President shall use the funds in accordance with Federal statutory authority to provide relief to consumers and others affected by the enactment of the Clean Energy Jobs and American Power Act (and amendments made by that Act).*

(b) ENERGY REFUND PROGRAM.*—*

(1) ESTABLISHMENT OF FUND.*—There is established in the Treasury a separate account, to be known as the 'Energy Refund Account'.*

(2) AVAILABILITY OF AMOUNTS.*—All amounts deposited in the Energy Refund Account shall be available without further appropriation or fiscal year limitation.*

(3) DISTRIBUTION OF AMOUNTS.*—For each year after deposits are made to the Energy Refund Account pursuant to section 771(b)(2)(B), the President shall use the funds in accordance with Federal statutory authority to offset energy cost impacts on low- and moderate-income households.*

SEC. 777. EXCHANGE FOR STATE-ISSUED ALLOWANCES.

(a) IN GENERAL.*—Not later than 1 year after the date of enactment of this title, the Administrator shall issue regulations allowing any person in the United States to exchange greenhouse gas emission allowances issued before the later of December 31, 2011, or the*

date that is 9 months after the first auction under section 778, by the State of California or for the Regional Greenhouse Gas Initiative, or the Western Climate Initiative (in this section referred to as 'State allowances') for emission allowances established by the Administrator under section 721(a).

(b) REGULATIONS.—*Regulations issued under subsection (a) shall—*

(1) provide that a person exchanging State allowances under this section receive emission allowances established under section 721(a) in the amount that is sufficient to compensate for the cost of obtaining and holding such State allowances;

(2) establish a deadline by which persons must exchange the State allowances;

(3) provide that the Federal emission allowances disbursed pursuant to this section shall be deducted from the allowances to be auctioned pursuant to section 771(b); and

(4) require that, once exchanged, the credit or other instrument be retired for purposes of use under the program by or for which it was originally issued.

(c) COST OF OBTAINING STATE ALLOWANCE.—*For purposes of this section, the cost of obtaining a State allowance shall be the average auction price, for emission allowances issued in the year in which the State allowance was issued, under the program under which the State allowance was issued.*

SEC. 778. AUCTION PROCEDURES.

(a) IN GENERAL.—*To the extent that auctions of emission allowances by the Administrator are authorized by this part, such auctions shall be carried out pursuant to this section and the regulations established hereunder.*

(b) INITIAL REGULATIONS.—*Not later than 12 months after the date of enactment of this title, the Administrator, in consultation with other agencies, as appropriate, shall promulgate regulations governing the auction of allowances under this section. Such regulations shall include the following requirements:*

(1) FREQUENCY; FIRST AUCTION.—*Auctions shall be held four times per year at regular intervals, with the first auction to be held no later than March 31, 2011.*

(2) AUCTION SCHEDULE; CURRENT AND FUTURE VINTAGES.—*The Administrator shall, at each quarterly auction under this section, offer for sale both a portion of the allowances with the same vintage year as the year in which the auction is being conducted and a portion of the allowances with vintage years from future years. The preceding sentence shall not apply to auctions held before 2012, during which period, by necessity, the Administrator shall auction only allowances with a vintage year that is later than the year in which the auction is held. Beginning with the first auction and at each quarterly auction held thereafter, the Administrator may offer for sale allowances with vintage years of up to 4 years after the year in which the auction is being conducted.*

(3) AUCTION FORMAT.—*Auctions shall follow a single-round, sealed-bid, uniform price format.*

(4) PARTICIPATION; FINANCIAL ASSURANCE.—*Auctions shall be open to any person, except that the Administrator may establish*

financial assurance requirements to ensure that auction participants can and will perform on their bids.

(5) DISCLOSURE OF BENEFICIAL OWNERSHIP.—*Each bidder in the auction shall be required to disclose the person or entity sponsoring or benefitting from the bidder's participation in the auction if such person or entity is, in whole or in part, other than the bidder.*

(6) PURCHASE LIMITS.—*No person may, directly or in concert with another participant, purchase more than 5 percent of the allowances offered for sale at any quarterly auction.*

(7) PUBLICATION OF INFORMATION.—*After the auction, the Administrator shall, in a timely fashion, publish the identities of winning bidders, the quantity of allowances obtained by each winning bidder, and the auction clearing price.*

(8) OTHER REQUIREMENTS.—*The Administrator may include in the regulations such other requirements or provisions as the Administrator, in consultation with other agencies, as appropriate, considers appropriate to promote effective, efficient, transparent, and fair administration of auctions under this section.*

(c) REVISION OF REGULATIONS.—*The Administrator may, in consultation with other agencies, as appropriate, at any time, revise the initial regulations promulgated under subsection (b) by promulgating new regulations. Such revised regulations need not meet the requirements identified in subsection (b) if the Administrator determines that an alternative auction design would be more effective, taking into account factors including costs of administration, transparency, fairness, and risks of collusion or manipulation. In determining whether and how to revise the initial regulations under this subsection, the Administrator shall not consider maximization of revenues to the Federal Government.*

(d) RESERVE AUCTION PRICE.—*The minimum reserve auction price shall be $10 (in constant 2005 dollars) for auctions occurring in 2012. The minimum reserve price for auctions occurring in years after 2012 shall be the minimum reserve auction price for the previous year increased by 5 percent plus the rate of inflation (as measured by the Consumer Price Index for all urban consumers).*

(e) DELEGATION OR CONTRACT.—*Pursuant to regulations under this section, the Administrator may by delegation or contract provide for the conduct of auctions under the Administrator's supervision by other departments or agencies of the Federal Government or by nongovernmental agencies, groups, or organizations.*

(f) SMALL BUSINESS REFINER RESERVE.—*The Administrator shall, in accordance with this subsection, issue regulations setting aside a specified number of allowances, as determined by the Administrator, that small business refiners may purchase at the average auction price and may use to demonstrate compliance pursuant to section 722. These regulations shall provide the following:*

(1) AMOUNT.—*The Administrator shall place in the small business refiner reserve account allowances that are to be sold at auction pursuant to the allocations under section 771 in an amount equal to—*

(A) for each of vintage years 2012 and 2013, 6.2 percent of the emission allowances established under section 721(a);

(B) for each of vintage years 2014 and 2015, 5.4 percent of the emission allowances established under section 721(a); and

(C) for each of vintage years 2016 through 2024, 4.9 percent of the emission allowances established under section 721(a).

(2) ALLOWED PURCHASES.—*From January 1 of the calendar year that matches the vintage year for which allowances have been placed in the reserve, through January 14 of the following year, small business refiners (as defined in section 775(b)) may purchase allowances from this reserve at the price determined pursuant to paragraph (3).*

(3) PRICE.—*The price for allowances purchased from this reserve shall be the average auction price for allowances of the same vintage year purchased at auctions conducted pursuant to this section during the 12 months preceding the purchase of the allowances.*

(4) USE OF ALLOWANCES.—*Allowances purchased from this reserve shall only be used by the purchaser to demonstrate compliance pursuant to section 722 for attributable greenhouse gas emissions in the calendar year that matches the vintage year of the purchased allowance. Allowances purchased from this reserve may not be banked, traded or borrowed.*

(5) LIMITATIONS ON PURCHASE AMOUNT.—*The Administrator, by regulation adopted after public notice and an opportunity for comment, shall establish procedures to distribute the ability to purchase allowances from the reserve fairly among all small business refiners interested in purchasing allowances from this reserve so as to address the potential that requests to purchase allowances exceed the number of allowances available in the reserve. This regulation may place limits on the number of allowances a small business refiner may purchase from the reserve.*

(6) UNSOLD ALLOWANCES.—*Vintage year allowances not sold from the reserve on or before January 15 of the calendar year following the vintage year shall be sold at an auction conducted pursuant to this section no later than March 31 of the calendar year following the vintage year. If significantly more allowances are being placed in the reserve than are being purchased from the reserve several years in a row, the Administrator may adjust either the percent of allowances placed in the reserve or the date by which allowances may be purchased from the reserve.*

SEC. 779. AUCTIONING ALLOWANCES FOR OTHER ENTITIES.

(a) CONSIGNMENT.—*Any entity holding emission allowances or compensatory allowances may request that the Administrator auction, pursuant to section 778, the allowances on consignment.*

(b) PRICING.—*When the Administrator acts under this section as the agent of an entity in possession of emission allowances, the Administrator is not obligated to obtain the highest price possible for the emission allowances, and instead shall auction consignment allowances in the same manner and pursuant to the same rules as auctions of other allowances under section 778. The Administrator may permit the entity offering the allowance for sale to condition the sale of its allowances pursuant to this section on a minimum reserve*

price that is different than the reserve auction price set pursuant to section 778(d).

(c) PROCEEDS.—*For emission allowances and compensatory allowances auctioned pursuant to this section, notwithstanding section 3302 of title 31, United States Code, or any other provision of law, within 90 days of receipt, the United States shall transfer the proceeds from the auction to the entity which held the allowances auctioned. No funds transferred from a purchaser to a seller of emission allowances or compensatory allowances under this subsection shall be held by any officer or employee of the United States or treated for any purpose as public monies.*

(d) REGULATIONS.—*The Administrator shall issue regulations within 24 months after the date of enactment of this title to implement this section.*

SEC. 780. COMMERCIAL DEPLOYMENT OF CARBON CAPTURE AND PERMANENT SEQUESTRATION TECHNOLOGIES.

(a) DEFINITIONS.—*In this section:*

(1) CARBON CAPTURE AND PERMANENT SEQUESTRATION.—*The term 'carbon capture and permanent sequestration' shall—*

(A) have such meaning as the Administrator shall determine by regulation; and

(B) include—

(i) permanent geological sequestration; and

(ii) conversion of captured carbon dioxide to a stable form that will safely and permanently sequester the carbon dioxide.

(2) ENHANCED HYDROCARBON RECOVERY.—

(A) IN GENERAL.—*The term 'enhanced hydrocarbon recovery' means a process by which oil, methane, or other natural gases are recovered by the injection of carbon dioxide into a geologic formation.*

(B) EXCLUSION.—*The term 'enhanced hydrocarbon recovery' does not include the in situ generation of a new hydrocarbon.*

(3) QUALIFYING ELECTRIC GENERATING UNIT.—*The term 'qualifying electric generating unit' means an electric utility unit—*

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

(i) coal or waste coal;

(ii) petroleum coke; or

(iii) any combination of those 2 fuels; and

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

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

(4) QUALIFYING INDUSTRIAL SOURCE.—*The term 'qualifying industrial source' means a source that—*

(A) is not a qualifying electric generating unit;

(B) absent carbon capture and permanent sequestration, would emit greater than 50,000 tons per year of carbon dioxide; and

(C) does not produce a liquid transportation fuel from a solid fossil-based feedstock.

(5) TREATED GENERATING CAPACITY.—

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

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

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

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

(b) REGULATIONS.—*Not later than 2 years after the date of enactment of this title, the Administrator shall promulgate regulations providing for the distribution of emission allowances allocated under section 771(a)(6), pursuant to the requirements of this section, to support the commercial deployment of carbon capture and permanent sequestration technologies in electric power generation and industrial operations.*

(c) ELIGIBILITY CRITERIA AND METHOD OF DISTRIBUTION.—

(1) ELIGIBILITY.—*For an owner or operator of a project to be eligible to receive emission allowances under this section, the project shall—*

(A) implement carbon capture and permanent sequestration technology—

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

(I) the unit, measured on an annual basis, as determined by the Administrator; or

(II) in the case of retrofit applications described in subsection (a)(2)(B)(ii), the treated portion of flue gas from the unit, measured on an annual basis, as determined by the Administrator; or

(ii) at a qualifying industrial source that, upon implementation, will achieve an emission limitation that is at least a 50-percent reduction in emissions of the carbon dioxide produced by the emission point, measured on an annual basis, as determined by the Administrator;

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

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

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

(D) be located in the United States.

(2) METHOD OF DISTRIBUTION.—

(A) PERIOD.—*The Administrator shall distribute emission allowances allocated under section 771(a)(6) to eligible projects for each of the first 10 calendar years for which each eligible project is in commercial operation.*

(B) BONUS ALLOWANCE FORMULA FOR ELECTRIC GENERATING UNITS.—

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

(I) the product obtained by multiplying—

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

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

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

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

(bb) the year in which the project receives an advanced distribution of emission allowances under subsection (h)(3)(B).

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

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

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

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

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

(d) PHASE I DISTRIBUTION TO ELECTRIC GENERATING UNITS.—

(1) APPLICABILITY.—

(A) IN GENERAL.—*Subject to subparagraph (B), this subsection shall apply to projects that are undertaken at qualifying electric generating units that the Administrator determines to be eligible to receive emission allowances under this section.*

(B) CAPACITY.—*The total cumulative generating capacity of the projects described in subparagraph (A) shall be equal to approximately 20 gigawatts of the treated generating capacity.*

(2) BONUS ALLOWANCE VALUES.—

(A) FIRST TRANCHE.—

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

(ii) CERTAIN UNITS.—*For an eligible project achieving carbon capture and permanent sequestration of 90 percent or more of the carbon dioxide that otherwise would be emitted by the unit, the bonus allowance value shall be $96 per ton of carbon dioxide emissions avoided through the use of carbon capture and permanent sequestration.*

(iii) BONUS ALLOWANCE VALUE.—*The Administrator shall establish, by regulation, a bonus allowance value for each rate of carbon capture and permanent sequestration achieved by an eligible project—*

(I) beginning at a minimum of $50 per ton for a 50-percent rate; and

(II) varying in direct proportion with increasing rates of carbon capture and permanent sequestration up to $96 per ton for an 90-percent rate.

(B) SECOND TRANCHE.—

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

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

emissions avoided through the use of capture and permanent sequestration.

(iii) BONUS ALLOWANCE VALUE.—*The Administrator shall establish, by regulation, a bonus allowance value for each rate of carbon capture and permanent sequestration achieved by an eligible project—*

(I) beginning at a minimum of $50 per ton for a 50-percent rate; and

(II) varying in direct proportion with increasing rates of carbon capture and permanent sequestration up to $85 per ton for a 90-percent rate.

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

(D) REDUCTION.—

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

(ii) ASSESSMENT OF NET COST.—*For the purpose of this subparagraph, an assessment of net cost of a project shall account for the cost of the injection of carbon dioxide, or other method of enhanced hydrocarbon recovery, that would have otherwise been undertaken in the absence of the carbon capture and permanent sequestration project under consideration.*

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

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

(G) AVERAGE FAIR MARKET VALUE.—

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

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

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

(II) distribute an appropriate quantity of emission allowances allocated under section 771(a)(6) from any future vintage year.

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

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

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

(3) REVERSE AUCTIONS.—

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

(B) REQUIREMENTS.—

(i) PROJECTS AT INDUSTRIAL SOURCES.—*The Administrator shall annually establish a reverse auction for projects at industrial sources, which may not participate in other auctions.*

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

(I) coal type;

(II) capture technology;

(III) geological formation type;

(IV) new unit versus retrofit application;

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

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

(iii) EFFICIENT DISTRIBUTION.—*The Administrator shall establish procedures for the auction of emission allowances under this subparagraph to ensure that the establishment of separate auctions for different project categories will not unduly impede the efficient and expeditious distribution of emission allowances to eligible projects under this subsection.*

(iv) MINIMUM RATES.—*The Administrator may establish appropriate minimum rates of carbon capture and permanent sequestration for the treated generating capacity of a project in implementing this subparagraph.*

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

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

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

(iii) the Administrator shall select bids within each auction for the permanent sequestration quantity submitted, beginning with the eligible project for which the bid is submitted for the lowest level of permanent sequestration incentive on a per-ton basis and meeting such other requirements as the Administrator may specify, until the amounts available for the reverse auction are committed.

(D) FORM OF DISTRIBUTION.—*The Administrator shall distribute emission allowances to the owners or operators of eligible projects selected through a reverse auction under this paragraph pursuant to a formula equivalent to the formula contained in subsection (c)(2)(B), except that the bonus allowance value that is bid by the applicable entity shall be substituted for the bonus allowance values described in subsection (c)(2).*

(4) ALTERNATIVE DISTRIBUTION METHOD.—

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

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

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

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

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

(i) based on the date of full-scale operation of carbon capture and permanent sequestration technology; and

(ii) pursuant to a formula that—

(I) is similar to the formula contained in subsection (c)(2)(C), except that the Administrator may prescribe bonus allowance values different than

those described in subsection (c)(2) based on the criteria established under subparagraph (E); and

(II) establishes the number of emission allowances to be distributed per ton of carbon dioxide sequestered by the project.

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

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

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

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

(I) coal type;

(II) capture and transportation technology;

(III) geological formation type;

(IV) new unit versus retrofit application;

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

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

(E) CRITERIA FOR ESTABLISHING BONUS ALLOWANCE VALUES.—*In establishing bonus allowance values under this paragraph, the Administrator shall seek to cover not more than the reasonable incremental capital and operating costs of a project that are attributable to implementation of carbon capture and permanent sequestration technologies and carbon transportation technologies, taking into account—*

(i) the reduced cost of compliance with section 722;

(ii) the reduced cost associated with sequestering in a geological formation for purposes of enhanced hydrocarbon recovery, as compared to permanent sequestration into geological formations solely for purposes of sequestration;

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

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

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

(f) LIMITS FOR CERTAIN ELECTRIC GENERATING UNITS.—

(1) DEFINITIONS.—*In this subsection, the terms 'covered EGU' and 'initially permitted' have the meanings given those terms in section 812.*

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

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

(i) 20 percent; and

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

(I) the earlier of—

(aa) January 1, 2020; and

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

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

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

(i) 20 percent; and

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

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

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

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

(4) EGUS RECEIVING ADVANCED DISTRIBUTION.—

(A) IN GENERAL.—*For an EGU that receives an advanced distribution of emission allowances, the Administrator shall reduce and recover, as applicable, the quantity of emission allowances that the owner or operator of the EGU*

has received and remains eligible to receive under this section, which shall be equal to the product obtained by multiplying—

(i) 20 percent; and

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

(I) the date that is 18 months after—

(aa) in the case of an EGU that was initially permitted during the period beginning on January 1, 2009, and ending on December 31, 2014, the date of commencement of operation of the EGU; or

(bb) in the case of an EGU that was initially permitted prior to January 1, 2009, the date that is 3 years after the date on which the project owner receives an advanced distribution for that EGU under subsection (h)(3)(B); and

(II) the first year that the EGU achieves (and thereafter maintains) an emission limitation that is at least a 50-percent reduction in emissions of carbon dioxide produced by the EGU, measured on an annual basis.

(B) EXTENSION.—

(i) IN GENERAL.—*If an owner or operator of an EGU that receives an advanced distribution of emission allowances determines that the owner or operator will not be able to achieve at least a 50-percent reduction in emissions of carbon dioxide produced by the EGU, as measured on an annual basis, by the date specified in subparagraph (A)(ii)(I), the owner or operator may petition the Administrator to extend that date by not more than 18 months.*

(ii) TIME OF SUBMISSION OF PETITION.—*The owner or operator shall submit a petition described in clause (i) to the Administrator as soon as practicable after the date on which the basis for the petition arises.*

(iii) CONDITIONS FOR EXTENSION.—*The Administrator shall prescribe, by regulation, the conditions under which an extension under clause (i) may be granted, including—*

(I) an inability of an EGU to sequester at the site, despite due diligence having been undertaken; and

(II) legal challenges to the implementation of the carbon capture and permanent sequestration technology.

(g) INDUSTRIAL SOURCES.—

(1) EMISSION ALLOWANCES.—*The Administrator—*

(A) may distribute not more than 15 percent of the emission allowances allocated under section 771(a)(6) for any vintage year to the owners or operators of eligible industrial sources to support the commercial-scale deployment of car-

bon capture and permanent sequestration technologies at those sources; and

(B) notwithstanding any other provision of law—

(i) may distribute to eligible industrial sources not more than 15 percent of the emission allowances allocated under section 771(a)(6) for any vintage year in the second tranche of phase I; but

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

(2) DISTRIBUTION.—

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

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

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

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

(3) REVISION OF REGULATIONS.—*The Administrator shall review and, as appropriate, revise the regulations under this subsection not less frequently than once every 8 years.*

(h) CERTIFICATION AND DISTRIBUTION.—

(1) CERTIFICATION.—

(A) REQUEST.—

(i) PHASE I; ALTERNATIVE DISTRIBUTION METHOD.—*In the case of a qualifying project that is eligible to receive allowances under phase I or under subsection (e)(4), at any time prior to placing a carbon capture and permanent sequestration project into commercial operation, the owner or operator of the planned project may request from the Administrator a certification that the project is eligible to receive emission allowances under this section.*

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

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

(iv) ISSUANCE.—*Not later than 90 days after the date on which the Administrator determines that the owner*

or operator of the planned project has submitted complete documentation pursuant to subparagraph (B), the Administrator shall issue a certification described in this subparagraph—

(I) if the owner or operator demonstrates a commitment to construct and operate a project that satisfies—

(aa) the eligibility criteria of subsection (c); and

(bb) the requirements of this paragraph; and

(II) that is based on the consideration by the Administrator of the documentation submitted pursuant to subparagraph (B), as well as other relevant information, as determined by the Administrator, in consultation with the owner or operator.

(B) DOCUMENTATION.—

(i) IN GENERAL.—*The Administrator shall prescribe, by regulation, the documentation necessary for making a determination of project eligibility for the certification under subparagraph (A), including—*

(I) in the case of a planned project receiving an advanced distribution of emission allowances, a commitment to implement carbon and permanent sequestration technology upon commencement of operation, to meet the eligibility requirements of (c)(1) by not later than 18 months after the date of commencement of operation;

(II) technical information regarding the carbon capture and permanent sequestration technology, coal type, geological formation type (if applicable), and other relevant design features that are planned for the project;

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

(IV) a demonstration that the owner or operator is committed to both constructing and operating the planned project on a timeline marked by reasonable milestones, through the completion of 1 of the actions specified in subparagraph (C)(iii);

(V) the amount of Federal funding the project owner has received, if any, to cover the costs of constructing a project that is eligible under this paragraph; and

(VI) an assessment of the costs of constructing the project, which shall serve as a basis for the determination of the Administrator regarding advanced distributions under paragraph (3)(C).

(ii) NONRETROFIT APPLICATION.—*In the case of a project that is not a retrofit application, the assessment of costs described in clause (i)(VI) shall include an assessment of the costs of constructing the electric gener-*

ating unit or industrial source that will produce the flue gas or fuel gas to be treated by the carbon capture and permanent sequestration technology.

(C) COMMITMENT.—

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

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

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

(I) the execution of—

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

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

(cc) an authorization by a State legislature to allow recovery, from the retail customers of electric utilities that are required to purchase some or all of the electricity from the project pursuant to State law, of the costs of the project, on the conditions that the project has been approved by the legislature and, under State law, retail electric providers are required collectively to purchase all of the net electric output from the project; and

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

(D) CONTENT OF CERTIFICATION.—*The Administrator shall prescribe, by regulation, the required content of each certification issued under this paragraph, including—*

(i) the annual reductions in carbon dioxide emissions that the carbon capture and sequestration technology the owner or operator of the planned project commits to achieve during each of the first 10 years that the project is in commercial operation, as specified in section 812;

(ii) the construction and operating milestones to which the owner or operator of the planned project commits;

(iii) a certification that the documentation submitted under subparagraph (B) is true and accurate;

(iv) for those sources that have received advanced distribution of emission allowances under paragraph (3)(B), the repayment periods that the Administrator has specified pursuant to paragraph (3)(D)(v) as of the effective date of the certification; and

(v) such other requirements as may be necessary to govern the advanced distribution of emission allowances between the Administrator and the owner or operator of the planned project, subject to the requirements of this subsection.

(E) FAILURE TO REQUEST CERTIFICATION.—

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

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

(2) RESERVATION OF EMISSION ALLOWANCES.—

(A) AMOUNT.—

(i) IN GENERAL.—*For each project that receives a certification of eligibility under paragraph (1), the Administrator shall reserve on a first-come, first-served basis a portion of the emission allowances that are allocated for the deployment of carbon capture and permanent sequestration technology under section 771(a)(6).*

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

(I) the applicable bonus allowance value;

(II) the number of tons of carbon dioxide emissions projected to be avoided through the use of carbon capture and permanent sequestration technologies during each calendar year under paragraph (1)(B)(i)(II); and

(III) a discount rate to account for the increase in the monetary inflation that may be expected to occur during each of the relevant 10 calendar years, as determined by the Administrator.

(B) TERMINATION OF RESERVATION.—

(i) IN GENERAL.—*A reservation of emission allowances for a particular project under subparagraph (A) shall terminate if the Administrator determines that the owner or operator has failed to achieve a reasonable number of milestones for commencing construction or commercial operation of the project, as specified under paragraph (1)(B)(i)(III).*

(ii) REDUCED QUANTITY OF CARBON DIOXIDE CAPTURED AND SEQUESTERED.—*If the quantity of carbon dioxide emissions avoided through the operation of the carbon capture and permanent sequestration project on average over 3 consecutive calendar years is less than the quantity specified for those calendar years under subparagraph (A), the reservation of emission allowances for the project under subparagraph (A) shall be reduced in future years by the difference between—*

(I) the quantity of carbon dioxide emissions avoided through operation of the carbon capture and permanent sequestration project on average over the applicable 3 consecutive years; and

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

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

(3) DISTRIBUTION PROCESS.—

(A) ANNUAL DISTRIBUTION.—

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

(ii) BASIS.—*The annual distribution of emission allowances shall be based on the total tons of carbon dioxide emissions avoided through operation of the carbon capture and permanent sequestration project during each of the first 10 years of commercial operation, in accordance with subsection (c)(2).*

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

(iv) REPORTS.—

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

operation of the carbon capture and permanent sequestration project.

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

(B) ADVANCED DISTRIBUTION.—

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

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

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

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

(I) prior to the operational phase of the project, at an appropriate milestone that best ensures the expeditious deployment of the carbon capture and permanent sequestration technology, as determined by the Administrator;

(II) in a quantity that equals a percentage, as specified in subparagraph (C), of the total number of emission allowances that the Administrator has reserved for that project during the 10-year period of commercial operation; and

(III) using allowances that are drawn—

(aa) from the current vintage year; or

(bb) if the allowances are exhausted from the current vintage year, in order from successive vintage years, beginning with the most proximate future vintage year.

(iii) REPORTS.—

(I) IN GENERAL.—*The owner or operator of a planned project that receives an advanced distribution of emission allowances shall submit to the Administrator, not later than 90 days after the end of each calendar year, a report describing the tons of carbon dioxide emissions avoided for that year through operation of the carbon capture and permanent sequestration project , compared to the total tons of carbon dioxide emissions generated by the unit on which the planned project is implemented.*

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

(III) AVOIDANCE OF DUPLICATIVE REPORTING.—*If the unit on which a planned project is implemented already submits the information required by subclause (I) to the Administrator pursuant to another reporting requirement, the owner or operator of the planned project may refer the Adminis-*

trator to the other submission in which the required information is provided.

(C) PERCENTAGES.—

(i) IN GENERAL.—*Subject to clauses (ii) and (iii), the Administrator shall apply the following percentages for determining the advanced distribution of emission allowances:*

(I) 70 percent of the emission allowance reservation for the first tranche under subsection (d)(2)(A).

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

(ii) COSTS LESS THAN VALUE OF ALLOWANCES.—*If the costs described in clause (iii) are less than the monetary value of allowances represented by the percentages described in clause (i) at the time of advanced distribution, the advanced distribution shall be limited to an amount that is equivalent to the costs described in clause (iii).*

(iii) COSTS.—

(I) IN GENERAL.—*For retrofit projects, the advanced distribution shall equate to 100 percent of the costs of permitting, design or engineering, labor, materials, land, and equipment associated with the construction and installation of the system to capture, compress, transport, and store carbon dioxide (including design changes to the associated generating unit needed to accommodate the carbon dioxide capture and compression system).*

(II) NEW ELECTRIC GENERATING UNITS.—*For new projects—*

(aa) the advanced distribution shall equate to 100 percent of the incremental permitting, design or engineering, labor, materials, land, and equipment cost differences between—

(AA) a new coal power plant with carbon capture and storage; and

(BB) a new coal power plant without carbon capture and storage in the location where the new coal power plant is being constructed, and for the same intended service territory absent carbon capture and storage; and

(bb) it shall be the responsibility of the organization that is requesting advanced distributions to provide to the Administrator a cost estimate for both the new coal power plant with carbon capture and storage and a new coal power plant without carbon capture and storage.

(III) REDUCTION.—*For the purposes of this subparagraph, the costs under this clause shall be reduced by the amounts documented under paragraph (1)(B)(i)(V).*

(D) RECONCILIATION FOR ADVANCED PAYMENTS.—

(i) IN GENERAL.—*In the case of a project that receives an advanced distribution of emission allowances under this paragraph, the Administrator shall distribute annually the remainder of emission allowances reserved under paragraph (2) once the carbon capture and permanent sequestration technology begins commercial operation.*

(ii) TIMING OF DISTRIBUTION.—*The annual distribution of emission allowances under clause (i) shall take place not later than 60 days after the end of each calendar year.*

(iii) CALCULATION OF REMAINING DISTRIBUTION.—*Subject to clauses (iv) and (v), the remaining distribution referred to in clause (i) shall annually be calculated upward or downward as the difference between—*

(I) the number of allowances that were reserved for the project in the relevant calendar year under paragraph (2)(A)(ii)(II); and

(II) the number of allowances that the project would be eligible to receive under the bonus allowance formula described in subsection (c)(2)(B)(i) based on the tons of carbon dioxide emissions that were avoided through operation of the carbon capture and permanent sequestration project during the relevant calendar year.

(iv) NUMBER OF ALLOWANCES.—*For purposes of clauses (iii)(II) and (viii)(I), for the purposes of calculating the number of allowances under subsection (c)(2)(B)(i), the Administrator shall enter the average fair market value of emission allowances in the year specified under subsection (c)(2)(B)(i)(II)(bb)).*

(v) METHODS OF RECONCILIATION.—

(I) IN GENERAL.—*If, in any calendar year, the number of tons of carbon dioxide emissions projected to be avoided for that year under paragraph (1)(B)(i)(III) is greater than the number of tons of carbon dioxide emissions that were actually avoided by a project during that year, based on the report submitted to the Administrator under paragraph (3)(B)(iii), the difference may be accounted for by—*

(aa) the owner or operator of the project capturing and storing an additional quantity of emissions that cumulatively exceeds the difference between—

(AA) the number of tons of carbon dioxide emissions that were projected to be avoided for the relevant calendar year under paragraph (1)(B)(i)(II); and

(BB) the number of tons of carbon dioxide emissions that were actually avoided

through operation of the project during that year;

(bb) the Administrator adjusting the annual distributions under clause (iii), on the condition that the reduction shall be sufficient to account for the difference described in this subclause within the period specified by the Administrator in subclause (II); or

(cc) the owner or operator of the project making a repayment in accordance with clause (vi).

(II) PERIOD.—*Compliance with subclause (I)(aa) shall occur over a period to be specified by the Administrator, but not to exceed 18 months.*

(III) INTEREST.—*The Administrator may apply an appropriate rate of interest to the repayment requirement under this clause.*

(vi) ALTERNATE REPAYMENT BY ALLOWANCES OR CASH.—*If the owner or operator of the project elects to comply by repaying in accordance with clause (v)(I)(aa), during the period specified by the Administrator under clause (v)(II), the owner or operator shall repay the Administrator an amount of allowances or cash (as calculated under clause (viii)) if—*

(I) the number of tons of carbon dioxide emissions that were actually avoided through operation of the project during that period is less than the number necessary to rectify the difference described in clause (v)(I); and

(II) the number of allowances remaining reserved for a project is insufficient to adjust for the difference under clause (iii).

(vii) MILESTONES.—*If the Administrator determines that the owner or operator failed to achieve a milestone for commencing construction or commercial operation of the project (as specified in paragraph (1)(B)), the owner or operator shall repay the Administrator an amount of allowances or cash calculated under clause (viii).*

(viii) CALCULATION.—*The repayments required under clauses (vi)(I) and (vii) shall be equal to, at the option of the owner or operator of the project—*

(I) the difference between the numbers of allowances described in subclauses (I) and (II) of clause (iii); or

(II) a cash payment in an amount equal to the product obtained by multiplying—

(aa) the difference between the numbers of allowances described in subclauses (I) and (II) of clause (iii); and

(bb) the average fair market value of an emission allowance during the year in which the repayment would be made under clause (vi).

(ix) USE OF REPAID AMOUNTS.—*The Administrator shall use amounts received as repayments under this subparagraph to support the deployment of carbon capture and permanent sequestration.*

(i) LIMITATIONS.—

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

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

(3) CAPACITY.—

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

(B) ALLOWANCE SURPLUS.—*On reaching the cumulative capacity described in subparagraph (A), any emission allowances that are allocated for carbon capture and permanent sequestration deployment under section 771(a)(6) and are not yet obligated under this section shall be treated as emission allowances not designated for distribution for purposes of section 771(b)(2).*

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

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

(2) DIFFERENT VINTAGE YEARS.—

(A) DETERMINATION.—*If the Administrator determines that the emission allowances allocated under section 771(a)(6) with a vintage year that matches the year of distribution will be exhausted once the estimated full 10-year distributions will be provided to current eligible participants, the Administrator shall provide to new eligible projects emission allowances from vintage years after the year of the distribution.*

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

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

(ii) Coal type, including waste coal.

(iii) Capture and transportation technologies.

(iv) Geological formations.

(v) New units and retrofit applications.

(k) DAVIS-BACON COMPLIANCE.—

(1) IN GENERAL.—*All laborers and mechanics employed on projects funded directly by or assisted in whole or in part by this section through the use of emission allowances shall be paid wages at rates not less than those prevailing on projects*

of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code.

(2) AUTHORITY.—*With respect to the labor standards specified in this subsection, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and section 3145 of title 40, United States Code.*

SEC. 781. OVERSIGHT OF ALLOCATIONS.

(a) IN GENERAL.—*Not later than January 1, 2014, and every 2 years thereafter, the Comptroller General of the United States shall carry out a review of programs administered by the Federal Government that distribute emission allowances or funds from any Federal auction of allowances.*

(b) CONTENTS.—*Each such report shall include a comprehensive evaluation of the administration and effectiveness of each program, including—*

(1) the efficiency, transparency, and soundness of the administration of each program;

(2) the performance of activities receiving assistance under each program;

(3) the cost-effectiveness of each program in achieving the stated purposes of the program; and

(4) recommendations, if any, for regulatory or administrative changes to each program to improve its effectiveness.

(c) FOCUS.—*In evaluating program performance, each review under this section review shall address the effectiveness of such programs in—*

(1) creating and preserving jobs;

(2) ensuring a manageable transition for working families and workers;

(3) reducing the emissions, or enhancing sequestration, of greenhouse gases;

(4) developing clean technologies; and

(5) building resilience to the impacts of climate change.

SEC. 782. EARLY ACTION RECOGNITION.

(a) IN GENERAL.—*Emission allowances allocated pursuant to section 771(a)(7) shall be distributed by the Administrator in accordance with this section. Not later than 1 year after the date of enactment of this title, the Administrator shall issue regulations allowing—*

(1) any person in the United States to exchange instruments in the nature of offset credits issued before January 1, 2009, by a State, local, or voluntary offset program with respect to which the Administrator has made an affirmative determination under section 740(a)(2), for emission allowances established by the Administrator under section 721(a); and

(2) the Administrator to provide compensation in the form of emission allowances to entities, including units of local government, that do not meet the criteria of paragraph (1) and meet the criteria of this paragraph for documented early reductions or avoidance of greenhouse gas emissions or greenhouse gases

sequestered before January 1, 2009, from projects or process improvements begun before January 1, 2009, where—

(A) the entity publicly stated greenhouse gas reduction goals and publicly reported against those goals;

(B) the entity demonstrated entity-wide net greenhouse gas reductions; and

(C) the entity demonstrates the actual projects or process improvements undertaken to make reductions and documents the reductions (such as through documentation of engineering projects).

(b) REGULATIONS.—*Regulations issued under subsection (a) shall—*

(1) provide that a person exchanging credits under subsection (a)(1) receive emission allowances established under section 721(a) in an amount for which the monetary value is equivalent to the average monetary value of the credits during the period from January 1, 2006, to January 1, 2009, as adjusted for inflation to reflect current dollar values at the time of the exchange;

(2) provide that a person receiving compensation for documented early action under subsection (a)(2) shall receive emission allowances established under section 721(a) in an amount that is approximately equivalent in value to the carbon dioxide equivalent per ton value received by entities in exchange for credits under paragraph (1) (as adjusted for inflation to reflect current dollar values at the time of the exchange), as determined by the Administrator;

(3) provide that only reductions or avoidance of greenhouse gas emissions, or sequestration of greenhouse gases, achieved by activities in the United States between January 1, 2001, and January 1, 2009, may be compensated under this section, and only credits issued for such activities may be exchanged under this section;

(4) provide that only credits that have not been retired or otherwise used to meet a voluntary or mandatory commitment, and have not expired, may be exchanged under subsection (a)(1);

(5) require that, once exchanged, the credit be retired for purposes of use under the program by or for which it was originally issued; and

(6) establish a deadline by which persons must exchange the credits or request compensation for early action under this section.

(c) PARTICIPATION.—*Participation in an exchange of credits for allowances or compensation for early action authorized by this section shall not preclude any person from participation in an offset credit program established under part D.*

SEC. 783. ESTABLISHMENT OF DEFICIT REDUCTION FUND.

(a) DEFICIT REDUCTION FUND.—*There is established in the Treasury of the United States a fund, to be known as the 'Deficit Reduction Fund'.*

(b) DISBURSEMENTS.—*No disbursement shall be made from the Deficit Reduction Fund except pursuant to an appropriation Act.*

TITLE VIII—ADDITIONAL GREENHOUSE GAS STANDARDS

SEC. 801. DEFINITIONS.

For purposes of this title, terms that are defined in title VII, except for the term 'stationary source', shall have the meanings given those terms in title VII.

PART A—STATIONARY SOURCE STANDARDS

SEC. 811. STANDARDS OF PERFORMANCE.

(a) DEFINITION OF UNCAPPED GREENHOUSE GAS EMISSIONS.*—In this section, the term 'uncapped greenhouse gas emissions' means those greenhouse gas emissions to which section 722 does not apply.*

(b) STANDARDS.*—Before January 1, 2020, the Administrator shall not promulgate new source performance standards for greenhouse gases under section 111 that are applicable to any stationary source that—*

(1) emits uncapped greenhouse gas emissions; and

(2) qualifies as an eligible offset project pursuant to section 733 that is eligible to receive an offset credit pursuant to section 737.

* * * * * * *

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

(a) DEFINITIONS.*—In this section:*

(1) COVERED EGU.*—The term 'covered EGU' means a utility unit that is—*

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

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

(i) coal;

(ii) petroleum coke; or

(iii) any combination of those fuels.

(2) INITIALLY PERMITTED.*—*

(A) IN GENERAL.*—The term 'initially permitted', with respect to a covered EGU, means that—*

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

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

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

(b) STANDARDS.*—*

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

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

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

(2) CERTAIN COVERED EGUS.—

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

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

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

(I) have a total of at least 10 gigawatts of capacity (including at least 3 gigawatts which shall be through electric generating units, and up to 1 gigawatt which may be through industrial applications (for which capture and permanent sequestration of 3,000,000 tons of carbon dioxide per year on an aggregate annualized basis shall be considered equivalent to 1 gigawatt)), measured as the sum of—

(aa) the treated generating capacity (as defined in section 780(a)) for electric generating unit retrofits and industrial sources; and

(bb) the nameplate capacity for new electric generating units;

"(II) include at least 3 electric generating units, each with a nameplate generating capacity of 250 megawatts or greater, that capture, inject, and sequester carbon dioxide into geological formations other than oil and gas fields; and

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

(ii) January 1, 2020.

(3) PROGRESS REVIEW.—

(A) IN GENERAL.—*Not later than June 30, 2017, the Administrator and the Secretary of Energy shall jointly prepare and submit to Congress a review of the status of com-*

mercial deployment of carbon capture and permanent sequestration technology that specifies—

(i) the number of and size of units in the United States that are capturing and permanently sequestering carbon dioxide;

(ii) the tons of carbon dioxide being captured and permanently sequestered by those units; and

(iii) the geographical and technological diversity represented by those units and that technology.

(B) FINDING.—*To accompany the report under subparagraph (A), the Administrator and the Secretary of Energy shall make a finding that, in light of the status of commercial deployment of carbon capture and permanent sequestration technology, the date set forth in paragraph (2)(B)(ii) should—*

(i) remain in effect; or

(ii) in accordance with subparagraph (C), be extended to January 1, 2022.

(C) CONDITIONS FOR EXTENSION.—*The date set forth in paragraph (2)(B)(ii) shall be extended to January 1, 2022, only if—*

(i) the Administrator and the Secretary jointly find, pursuant to subparagraph (B), that the extension should occur; and

(ii) Congress acts to approve the finding by not later than January 1, 2018.

(4) UNIT-SPECIFIC EXTENSION.—

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

(B) REQUEST.—*An owner or operator of a covered EGU shall submit to the Administrator a request for an extension under subparagraph (A) by not later than June 1, 2018.*

(C) PUBLIC COMMENT.—*The Administrator shall provide for public notice and comment on each extension request submitted under subparagraph (B).*

(c) REVIEW AND REVISION OF STANDARDS.—*Not later than the date specified in subsection (b)(2)(B), and not less frequently than once every 5 years thereafter, the Administrator shall—*

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

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

(d) REPORTS.—*Not later than the date that is 18 months after the date of enactment of this title, and semiannually thereafter, the Administrator shall publish a report on the nameplate capacity of units (determined pursuant to subsection (b)(2)(A)) in commercial operation in the United States equipped with carbon capture and storage technology, including the information described in subsection (b)(2)(A) (including the cumulative generating capacity to which carbon capture and storage retrofit projects meeting the criteria described in section 780(c)(1)(A) has been applied and the quantities of carbon dioxide captured and sequestered by those projects).*

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

SEC. 813. GEOLOGICAL STORAGE SITES.

(a) COORDINATED PROCESS.—

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

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

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

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

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

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

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

(2) requirements for—

(A) monitoring, recordkeeping, and reporting for emissions associated with injection into, and escape from, geological storage sites, taking into account any requirements or protocols developed under section 713;

(B) public participation in the certification process that maximizes transparency;

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

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

(d) REPORT.—

(1) IN GENERAL.—*Not later than 2 years after the date of promulgation of regulations pursuant to subsection (b), and not*

less frequently than once every 3 years thereafter, the Administrator shall submit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Environment and Public Works of the Senate a report describing geological storage in the United States, and, to the extent relevant, other countries in North America.

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

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

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

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

(D) other relevant information.

PART B—MOBILE SOURCES

SEC. 821. GREENHOUSE GAS EMISSION STANDARDS FOR MOBILE SOURCES.

(a) NEW MOTOR VEHICLES AND NEW MOTOR VEHICLE ENGINES.*—(1) Pursuant to section 202(a)(1), by December 31, 2010, the Administrator shall promulgate standards applicable to emissions of greenhouse gases from new heavy-duty motor vehicles or new heavy-duty motor vehicle engines, excluding such motor vehicles covered by the Tier II standards (as established by the Administrator as of the date of the enactment of this section). The Administrator may revise these standards from time to time.*

(2) Regulations issued under section 202(a)(1) applicable to emissions of greenhouse gases from new heavy-duty motor vehicles or new heavy-duty motor vehicle engines, excluding such motor vehicles covered by the Tier II standards (as established by the Administrator as of the date of the enactment of this section), shall contain standards that reflect the greatest degree of emissions reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology. Any such regulations shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, and, at a minimum, shall apply for a period no less than 3 model years beginning no earlier than the model year commencing 4 years after such regulations are promulgated.

(3) Regulations issued under section 202(a)(1) applicable to emissions of greenhouse gases from new heavy-duty motor vehicles or new heavy-duty motor vehicle engines, excluding such motor vehicles covered by the Tier II standards (as established by the Administrator as of the date of the enactment of this section), shall supersede and satisfy any and all of the rulemaking and compliance requirements of section 32902(k) of title 49, United States Code.

(4) Other than as specifically set forth in paragraph (3) of this subsection, nothing in this section shall affect or otherwise increase or diminish the authority of the Secretary of Transportation to adopt regulations to improve the overall fuel efficiency of the commercial goods movement system.

(b) NONROAD VEHICLES AND ENGINES.*—(1) Pursuant to section 213(a)(4) and (5), the Administrator shall identify those classes or categories of new nonroad vehicles or engines, or combinations of such classes or categories, that, in the judgment of the Administrator, both contribute significantly to the total emissions of greenhouse gases from nonroad engines and vehicles, and provide the greatest potential for significant and cost-effective reductions in emissions of greenhouse gases. The Administrator shall promulgate standards applicable to emissions of greenhouse gases from these new nonroad engines or vehicles by December 31, 2012. The Administrator shall also promulgate standards applicable to emissions of greenhouse gases for such other classes and categories of new nonroad vehicles and engines as the Administrator determines appropriate and in the timeframe the Administrator determines appropriate. The Administrator shall base such determination, among other factors, on the relative contribution of greenhouse gas emissions, and the costs for achieving reductions, from such classes or categories of new nonroad engines and vehicles. The Administrator may revise these standards from time to time.*

(2) Standards under section 213(a)(4) and (5) applicable to emissions of greenhouse gases from those classes or categories of new nonroad engines or vehicles identified in the first sentence of paragraph (1) of this subsection, shall achieve the greatest degree of emissions reduction achievable based on the application of technology which the Administrator determines will be available at the time such standards take effect, taking into consideration cost, energy, and safety factors associated with the application of such technology. Any such regulations shall take effect at the earliest possible date after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period, the applicable compliance dates for other standards, and other appropriate factors, including the period of time appropriate for the transfer of applicable technology from other applications, including motor vehicles, and the period of time in which previously promulgated regulations have been in effect.

(3) For purposes of this section and standards under section 213(a)(4) or (5) applicable to emissions of greenhouse gases, the term 'nonroad engines and vehicles' shall include non-internal combustion engines and the vehicles these engines power (such as electric engines and electric vehicles), for those non-internal combustion engines and vehicles which would be in the same category and have the same uses as nonroad engines and vehicles that are powered by internal combustion engines.

(c) AVERAGING, BANKING, AND TRADING OF EMISSIONS CREDITS.*—In establishing standards applicable to emissions of greenhouse gases pursuant to this section and sections 202(a), 213(a)(4) and (5), and 231(a), the Administrator may establish provisions for averaging, banking, and trading of greenhouse gas emissions credits*

within or across classes or categories of motor vehicles and motor vehicle engines, nonroad vehicles and engines (including marine vessels), and aircraft and aircraft engines, to the extent the Administrator determines appropriate and considering the factors appropriate in setting standards under those sections. Such provisions may include reasonable and appropriate provisions concerning generation, banking, trading, duration, and use of credits.

(d) REPORTS.—*The Administrator shall, from time to time, submit a report to Congress that projects the amount of greenhouse gas emissions from the transportation sector, including transportation fuels, for the years 2030 and 2050, based on the standards adopted under this section.*

(e) GREENHOUSE GASES.—*Notwithstanding the provisions of section 711, hydrofluorocarbons shall be considered a greenhouse gas for purposes of this section.*

SEC. 822. SMARTWAY TRANSPORTATION EFFICIENCY PROGRAM.

(a) IN GENERAL.—*There is established within the Environmental Protection Agency a SmartWay Transportation Efficiency Program to quantify, demonstrate, and promote the benefits of technologies, products, fuels, and operational strategies that reduce petroleum consumption, air pollution, and greenhouse gas emissions from the mobile source sector.*

(b) GENERAL DUTIES.—*Under the program established under this section, the Administrator shall carry out each of the following:*

(1) Development of measurement protocols to evaluate the energy consumption and greenhouse gas impacts from technologies and strategies in the mobile source sector, including those for passenger transport and goods movement.

(2) Development of qualifying thresholds for certifying, verifying, or designating energy-efficient, low-greenhouse gas SmartWay technologies and strategies for each mode of passenger transportation and goods movement.

(3) Development of partnership and recognition programs to promote best practices and drive demand for energy-efficient, low-greenhouse gas transportation performance.

(4) Promotion of the availability of, and encouragement of the adoption of, SmartWay certified or verified technologies and strategies, and publication of the availability of financial incentives, such as assistance from loan programs and other Federal and State incentives.

(c) SMARTWAY TRANSPORT FREIGHT PARTNERSHIP.—*The Administrator shall establish a SmartWay Transport Partnership program with shippers and carriers of goods to promote energy-efficient, low-greenhouse gas transportation. In carrying out such partnership, the Administrator shall undertake each of the following:*

(1) Verification of the energy and greenhouse gas performance of participating freight carriers, including those operating rail, trucking, marine, and other goods movement operations.

(2) Publication of a comprehensive energy and greenhouse gas performance index of freight modes (including rail, trucking, marine, and other modes of transporting goods) and individual freight companies so that shippers can choose to deliver their goods more efficiently.

(3) Development of tools for—

(A) carriers to calculate their energy and greenhouse gas performance; and

(B) shippers to calculate the energy and greenhouse gas impacts of moving their products and to evaluate the relative impacts from transporting their goods by different modes and corporate carriers.

(4) Provision of recognition opportunities for participating shipper and carrier companies demonstrating advanced practices and achieving superior levels of greenhouse gas performance.

(d) IMPROVING FREIGHT GREENHOUSE GAS PERFORMANCE DATABASES.—*The Secretary of Transportation shall, in coordination with other appropriate agencies, define and collect data on the physical and operational characteristics of the Nation's truck population, with special emphasis on data related to energy efficiency and greenhouse gas performance to inform the performance index published under subsection (c)(2) of this section, and other means of goods transport as necessary, at least every 5 years.*

(e) SMARTWAY PASSENGER TRANSPORT STUDY.—

(1) IN GENERAL.—*Not later than 1 year after the date of enactment of this section, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report that describes the results of a study of the commercial passenger carrier industry, including tour, charter, intercity, commuter, and other passenger operations.*

(2) INCLUSIONS.—*The study under paragraph (1) shall include—*

(A) an identification of options for commercial passenger carriers to promote energy-efficient, low-greenhouse gas emission transportation; and

(B) at the discretion of the Administrator, support for a partnership and recognition program for those commercial passenger carrier companies that demonstrate and achieve superior levels of greenhouse gas emissions performance.

(f) ESTABLISHMENT OF FINANCING PROGRAM.—*The Administrator shall establish a SmartWay Financing Program to competitively award funding to eligible entities identified by the Administrator in accordance with the program requirements in subsection (h).*

(g) PURPOSES.—*Under the SmartWay Financing Program, eligible entities shall—*

(1) use funds awarded by the Administrator to provide flexible loan and/or lease terms that increase approval rates or lower the costs of loans and/or leases in accordance with guidance developed by the Administrator;

(2) make such loans and/or leases available to public and private entities for the purpose of adopting low-greenhouse gas technologies or strategies for the mobile source sector that are designated by the Administrator; and

(3) use funds provided by the Administrator for electrification of freight transportation systems in major national goods movement corridors, giving priority to electrification of transportation systems in areas that are gateways for high volumes of international and national freight transport and require sub-

stantial criteria pollutant emission reductions in order to attain national ambient air quality standards.

(h) PROGRAM REQUIREMENTS.—*The Administrator shall determine program design elements and requirements, including—*

(1) the type of financial mechanism with which to award funding, in the form of grants and/or contracts;

(2) the designation of eligible entities to receive funding, such as State, tribal, and local governments, regional organizations comprised of governmental units, nonprofit organizations, or for-profit companies;

(3) criteria for evaluating applications from eligible entities, including anticipated—

(A) cost-effectiveness of loan or lease program on a metric-ton-of-greenhouse gas-saved-per-dollar basis; and

(B) ability to promote the loan or lease program and associated technologies and strategies to the target audience; and

(4) reporting requirements for entities that receive awards, including—

(A) actual cost-effectiveness and greenhouse gas savings from the loan or lease program based on a methodology designated by the Administrator;

(B) the total number of applications and number of approved applications; and

(C) terms granted to loan and lease recipients compared to prevailing market practices and/or rates.

(i) AUTHORIZATION OF APPROPRIATIONS.—*Such sums as necessary are authorized to be appropriated to the Administrator to carry out this section.*

PART C—TRANSPORTATION EMISSIONS

SEC. 831. GREENHOUSE GAS EMISSION REDUCTIONS THROUGH TRANSPORTATION EFFICIENCY.

(a) IN GENERAL.—*The Administrator, in consultation with the Secretary of Transportation (referred to in this part as the "Secretary"), shall promulgate, and update from time to time, regulations to establish—*

(1) national transportation-related greenhouse gas emission reduction goals that are commensurate with the emission reduction goals established under the Clean Energy Jobs and American Power Act and amendments made by that Act;

(2) standardized emission models and related methods, to be used by States, metropolitan planning organizations, and air quality agencies to address emission reduction goals, including—

(A) the development of surface transportation-related greenhouse gas emission reduction targets pursuant to sections 134 and 135 of title 23, and sections 5303 and 5304 of title 49, United States Code;

(B) the assessment of projected surface transportation-related greenhouse gas emissions from transportation strategies;

(C) the assessment of projected surface transportation-related greenhouse gas emissions from State and regional transportation plans;

(D) the establishment of surface transportation-related greenhouse gas emission baselines at a national, State, and regional levels; and

(E) the measurement and assessment of actual surface transportation-related emissions to assess progress toward achievement of emission targets at the State and regional levels;

(3) methods for collection of data on transportation-related greenhouse gas emissions; and

(4) publication and distribution of successful strategies employed by States, Indian tribes, metropolitan planning organizations, and other entities to reduce transportation-related greenhouse gas emissions.

(b) ROLE OF DEPARTMENT OF TRANSPORTATION.*—The Secretary, in consultation with the Administrator, shall promulgate, and update from time to time, regulations—*

(1) to improve the ability of transportation planning models and tools, including travel demand models, to address greenhouse gas emissions;

(2) to assess projected surface transportation-related travel activity and transportation strategies from State and regional transportation plans; and

(3) to update transportation planning requirements and approval of transportation plans as necessary to carry out this section.

(c) CONSULTATION AND MODELS.*—In promulgating the regulations, the Administrator and the Secretary—*

(1) shall consult with States, Indian tribes, metropolitan planning organizations, and air quality agencies;

(2) may use existing models and methodologies if the models and methodologies are widely considered to reflect the best practicable modeling or methodological approach for assessing actual and projected transportation-related greenhouse gas emissions from transportation plans and projects; and

(3) shall consider previously developed plans that were based on models and methodologies for reducing greenhouse gas emissions in applying those regulations to the first approvals after promulgation.

(d) TIMING.*—The Administrator and the Secretary shall—*

(1) publish proposed regulations under subsections (a) and (b) not later than 1 year after the date of enactment of this section; and

(2) promulgate final regulations under subsections (a) and (b) not later than 18 months after the date of enactment of this section.

(e) ASSESSMENT.*—*

(1) IN GENERAL.*—At least every 6 years after promulgating final regulations under subsections (a) and (b), the Administrator and the Secretary shall jointly assess current and projected progress in reducing national transportation-related greenhouse gas emissions.*

(2) REQUIREMENTS.—The assessment shall examine the contributions to emission reductions attributable to—

(A) improvements in vehicle efficiency;

(B) greenhouse gas performance of transportation fuels;

(C) reductions in vehicle miles traveled;

(D) changes in consumer demand and use of transportation management systems; and

(E) any other greenhouse gas-related transportation policies enacted by Congress.

(3) RESULTS OF ASSESSMENT.—The Secretary and the Administrator shall consider—

(A) the results of the assessment conducted under this subsection; and

(B) based on those results, whether technical or other updates to regulations required under this section and sections 134 and 135 of title 23, and sections 5303 and 5304 of title 49, United States Code, are necessary.

* * * * * * *

SEC. 832. TRANSPORTATION GREENHOUSE GAS EMISSION REDUCTION PROGRAM GRANTS.

(a) IN GENERAL.—The Secretary of Transportation (referred to in this section as the 'Secretary') shall provide grants to States and metropolitan planning organizations to carry out the purposes of this section for each fiscal year—

(1) to support the developing and updating of transportation greenhouse gas reduction targets and strategies; and

(2) to provide financial assistance to implement plans approved pursuant to—

(A) sections 134(k)(6) and 135(f)(9) of title 23, United States Code; and

(B) sections 5303(k)(6) and 5304(f)(9) of title 49, United States Code.

(b) PLANNING GRANTS.—

(1) IN GENERAL.—Subject to paragraph (2), the Secretary shall allocate not more than 10 percent of the funds available to carry out this section for a fiscal year for metropolitan planning organizations to develop and update transportation plans, including targets and strategies for greenhouse gas emission reduction under—

(A) sections 134(k)(6) and 135(f)(9) of title 23, United States Code; and

(B) sections 5303(k)(6) and 5304(f)(9) of title 49, United States Code.

(2) ELIGIBLE ORGANIZATIONS.—The Secretary shall distribute the funds available in (1) to metropolitan planning organizations (as defined in section 134(k)(7) of title 23, United States Code) in the proportion that—

(A) the population within such a metropolitan planning organization; bears to

(B) the total population of all such metropolitan planning organizations.

(c) PERFORMANCE GRANTS.—

(1) IN GENERAL.—*After allocating funds pursuant to subsection (b)(1), and subject to subsection (h), the Secretary shall use the remainder of amounts made available to carry out this section to provide grants to States and metropolitan planning organizations.*

(2) CRITERIA.—*In providing grants under this subsection, the Secretary, in consultation with the Administrator, shall develop criteria for providing the grants, taking into consideration, with respect to areas to be covered by the grants—*

(A) the quantity of total greenhouse gas emissions to be reduced as a result of implementation of a plan, within a covered area, as determined by methods established under section 831(a);

(B) the quantity of total greenhouse gas emissions to be reduced per capita as a result of implementation of a plan, within the covered area, as determined by methods established under section 831(a);

(C) the cost-effectiveness of reducing greenhouse gas emissions during the life of the plan;

(D) progress toward achieving emission reductions target established under—

(i) sections 134(k)(6) and 135(f)(9) of title 23, United States Code; and

(ii) sections 5303(k)(6) and 5304(f)(9) of title 49, United States Code;

(E) reductions in greenhouse gas emissions previously achieved by States and metropolitan planning organizations during the 5-year period beginning on the date of enactment of this Act;

(F) plans that increase transportation options and mobility, particularly for low-income individuals, minorities, the elderly, households without motor vehicles, cost-burdened households, and the disabled; and

(G) other factors, including innovative approaches, minimization of costs, and consideration of economic development, revenue generation, consumer fuel cost-savings, and other economic, environmental and health benefits, as the Secretary determines to be appropriate.

(d) REQUIREMENT FOR REDUCED EMISSIONS.—A performance grant under subsection (c) may be used only to fund strategies that demonstrate a reduction in greenhouse gas emissions that is sustainable over the life of the applicable transportation plan.

(e) COST-SHARING.—The Federal share of the costs of a project receiving Federal financial assistance under this section shall be 80 percent.

(f) COMPLIANCE WITH APPLICABLE LAWS.—

(1) IN GENERAL.—*Subject to paragraph (2), a project receiving funds under this section shall comply with all applicable Federal laws (including regulations), including—*

(A) subchapter IV of chapter 31 of title 40, United States Code; and

(B) applicable requirements of titles 23 and 49, United States Code.

(2) ELIGIBILITY.—*Project eligibility shall be determined in accordance with this section.*

(3) DETERMINATION OF APPLICABLE MODAL REQUIREMENTS.—*The Secretary shall—*

(A) have the discretion to designate the specific modal requirements that shall apply to a project; and

(B) be guided by the predominant modal characteristics of the project in the event that a project has cross-modal application.

(g) ADDITIONAL REQUIREMENTS.—

(1) IN GENERAL.—*As a condition on the receipt of financial assistance under this section, the interests of public transportation employees affected by the assistance shall be protected under arrangements that the Secretary of Labor determines—*

(A) to be fair and equitable; and

(B) to provide benefits equal to the benefits established under section 5333(b) of title 49, United States Code.

(2) WAGES AND BENEFITS.—*Laborers and mechanics employed on projects funded with amounts made available under this section shall be paid wages and benefits not less than those determined by the Secretary of Labor under subchapter IV of chapter 31 of title 40, United States Code, to be prevailing in the same locality.*

(h) ADMINISTRATIVE EXPENSES.—*Not more than 5 percent of the funds made available to carry out this section may be used by the Secretary to pay the administrative expenses necessary to carry out this section for a fiscal year.*

(i) MISCELLANEOUS.—

(1) ROAD-USE AND CONGESTION PRICING MEASURES.—*All projects funded by amounts made available under this section shall be eligible to receive amounts collected through road-use and congestion pricing measures.*

(2) LIMITATIONS.—*The Administrator may not approve any transportation plan for a project that would be inconsistent with existing design, procurement, and construction guidelines established by the Department of Transportation.*

(3) SUBGRANTEES.—*With the approval of the Secretary, recipients of funding under this section may enter into agreements providing for the transfer of funds to private transportation providers or noneligible public entities (such as local governments, air quality agencies, zoning commissions, special districts and transit agencies) that have statutory responsibility or authority for actions necessary to implement the strategies pursuant to—*

(A) sections 134(k)(6) and 135(f)(9) of title 23, United States Code; and

(B) sections 5303(k)(6) and 5304(f)(9) of title 49, United States Code.

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PART D—PLAN REQUIREMENTS FOR NONATTAINMENT AREAS

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PART E—BLACK CARBON

SEC. 851. BLACK CARBON.

(a) DOMESTIC BLACK CARBON MITIGATION.—

(1) IN GENERAL.—*Taking into consideration the public health and environmental impacts of black carbon emissions, including the effects on global and regional warming, the Arctic, and other snow and ice-covered surfaces, the Administrator shall—*

(A) not later than 2 years after the date of enactment of this part, propose—

(i) regulations applicable to emissions of black carbon under the existing authorities of this Act; or

(ii) a finding that existing regulations promulgated pursuant to this Act adequately regulate black carbon emissions, which finding may be based on a finding that existing regulations, in the judgment of the Administrator—

(I) address those sources that both contribute significantly to the total emissions of black carbon and provide the greatest potential for significant and cost-effective reductions in emissions of black carbon, under the existing authorities; and

(II) reflect the greatest degree of emission reduction achievable through application of technology that will be available for such sources, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology; and

(B) not later than 3 years after the date of enactment of this part, promulgate final regulations under the existing authorities of this Act or finalize the proposed finding.

(2) APPLICABILITY OF REGULATIONS.—*Regulations promulgated under paragraph (1) shall not apply to specific types, classes, categories, or other suitable groupings of emission sources that the Administrator finds are subject to adequate regulation.*

(b) AUTHORIZATION OF APPROPRIATIONS.—*There are authorized to be appropriated such sums as are necessary to carry out this section.*

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PART F—MISCELLANEOUS

SEC. 861. STATE PROGRAMS.

(a) IN GENERAL.—*Notwithstanding section 116, if a Federal auction is conducted, by the deadline of March 31, 2011, as established in section 778, no State or political subdivision thereof shall implement or enforce a comprehensive greenhouse gas emission limitation program that covers any capped emissions emitted during the years 2012 through 2017.*

(b) DEADLINE.—*Notwithstanding section 116, in the event the March 31, 2011 auction is delayed, no State or political subdivision thereof shall enforce a comprehensive greenhouse gas emission limi-*

tation program that covers any capped emissions emitted during the period that commences at least 9 months after the date of the first auction as set out in section 778, through 2017.

(c) DEFINITION OF COMPREHENSIVE GREENHOUSE GAS EMISSION LIMITATION PROGRAM.—*For purposes of this section, the term 'comprehensive greenhouse gas emission limitation program' means a system of greenhouse gas regulation under which a State or political subdivision issues a limited number of tradable instruments in the nature of emission allowances and requires that sources within its jurisdiction surrender such tradable instruments for each unit of greenhouse gases emitted during a compliance period. For purposes of this section, a 'comprehensive greenhouse gas emission limitation program' does not include a target or limit on greenhouse gas emissions adopted by a State or political subdivision that is implemented other than through the issuance and surrender of a limited number of tradable instruments in the nature of emission allowances, nor does it include any other standard, limit, regulation, or program to reduce greenhouse gas emissions that is not implemented through the issuance and surrender of a limited number of tradable instruments in the nature of emission allowances. For purposes of this section, the term 'comprehensive greenhouse gas emission limitation program' does not include, among other things, fleetwide motor vehicle emission requirements that allow greater emissions with increased vehicle production, or requirements that fuels, or other products, meet an average pollution emission rate or lifecycle greenhouse gas standard.*

SEC. 862. GRANTS FOR SUPPORT OF AIR POLLUTION CONTROL PROGRAMS.

The Administrator is authorized to make grants to air pollution control agencies pursuant to section 105 for purposes of assisting in the implementation of programs to address global warming established under the Clean Energy Jobs and American Power Act.

SEC. 863. REDUCING ACID RAIN AND MERCURY POLLUTION.

(a) IN GENERAL.—*Not later than 18 months after the date of enactment of this part, the Administrator shall submit to Congress a report that analyzes the effects of different carbon dioxide reduction strategies and technologies on the emissions of mercury, sulfur dioxide, and nitrogen oxide, which cause acid rain, particulate matter, ground-level ozone, mercury contamination, and other environmental problems.*

(b) INCLUSIONS.—*The report under subsection (a) shall include—*

(1) an assessment of a variety of carbon reduction technologies, including the application of various carbon capture and sequestration technologies for new and existing power plants;

(2) an assessment of the current scientific and technical understanding of the interplay between the various technologies and emissions of air pollutants;

(3) identification of hurdles to strategies that could cost-effectively reduce emissions of multiple pollutants; and

(4) appropriate recommendations of the Administrator, if any.

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[TITLE IV—NOISE POLLUTION]*TITLE IX—NOISE POLLUTION*

SEC. [401]*901*. This title may be cited as the "Noise Pollution and Abatement Act of 1970".

SEC. [402]*902*. (a) The Administrator shall establish within the the Environmental Protection Agency an Office of Noise Abatement and Control, and shall carry out through such Office a full and complete investigation and study of noise and its effect on the public health and welfare in order to (1) identify and classify causes and sources of noise, and (2) determine—

(A) effects at various levels;

(B) projected growth of noise levels in urban areas through the year 2000;

(C) the psychological and physiological effect on humans;

(D) effects of sporadic extreme noise (such as jet noise near airports) as compared with constant noise;

(E) effect on wildlife and property (including values);

(F) effect of sonic booms on property (including values); and

(G) such other matters as may be of interest in the public welfare.

(b) In conducting such investigation, the Administrator shall hold public hearings, conduct research, experiments, demonstrations, and studies. The Administrator shall report the results of such investigation and study, together with his recommendations for legislation or other action, to the President and the Congress not later than one year after the date of enactment of this title.

(c) In any case where any Federal department or a agency is carrying out or sponsoring any activity resulting in noise which the administrator determines amounts to a public nuisance or is otherwise objectionable, such department or agency shall consult with the Administrator to determine possible means of abating such noise.

SEC. [403]*903*. There is authorized to be appropriated such amount, not to exceed $30,000,000, as may be necessary for the purposes of this title.

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CHAPTER 1 OF TITLE 23, UNITED STATES CODE

* * * * * * *

SEC. 134

Metropolitan transportation planning

(a) POLICY.—It is in the national interest to—

(1) encourage and promote the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight and foster economic growth and development within and between States and urbanized areas, while [minimizing]*reducing* transportation-related fuel consumption*, reliance on oil, impacts on the environment, transportation-related greenhouse gas emissions,* and air pollution through metropolitan and state-

wide transportation planning processes identified in this chapter; and

* * * * * * *

(h) SCOPE OF PLANNING PROCESS.—

(1) IN GENERAL.—The metropolitan planning process for a metropolitan planning area under this section shall provide for consideration of projects and strategies that will—

(A) support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

(B) increase the safety of the transportation system for motorized and nonmotorized users;

(C) increase the security of the transportation system for motorized and nonmotorized users;

(D) increase the accessibility and mobility of people and for freight;

(E) protect and enhance the environment, promote energy conservation,*sustainability, and livability, reduce surface transportation-related greenhouse gas emissions and reliance on oil, adapt to the effects of climate change,* improve the quality of life*and public health*, and promote consistency between transportation improvements and State and local planned growth and economic development patterns*,including housing and land use patterns*;

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(i) DEVELOPMENT OF TRANSPORTATION PLAN.—

(1) IN GENERAL.—* * *

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(4) CONSULTATION.—

(A) IN GENERAL.—In each metropolitan area, the metropolitan planning organization shall **[**consult, as appropriate,**]***cooperate* with State and local agencies responsible for*transportation, public transportation, air quality, and housing, and shall consult, as appropriate, with State and local agencies and Indian tribes responsible for* land use management, natural resources, environmental protection, conservation,*public health,* and historic preservation concerning the development of a long-range transportation plan.

(B) ISSUES.—The consultation shall involve, as appropriate—

(i) comparison of transportation plans with State conservation plans or maps, if available; or

(ii) comparison of transportation plans to inventories of natural or historic resources, if available.

(5) PARTICIPATION BY INTERESTED PARTIES.—

(A) IN GENERAL.—Each metropolitan planning organization shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedes-

trian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan.

(B) CONTENTS OF PARTICIPATION PLAN.—A participation plan—

(i) shall be developed in consultation with all interested parties; and

(ii) shall provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan.

(C) METHODS.—In carrying out subparagraph (A), the metropolitan planning organization shall, to the maximum extent practicable—

(i) hold any public meetings at convenient and accessible locations and times;

(ii) employ visualization techniques to describe plans; and

(iii) make public information available in electronically accessible format and means, such as the World Wide Web, as appropriate to afford reasonable opportunity for consideration of public information under subparagraph (A).

(6) PUBLICATION.—A transportation plan involving Federal participation shall be published or otherwise made readily available by the metropolitan planning organization for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web*and through the website of the metropolitan planning organization, including emission reduction targets and strategies developed under subsection (k) (6), including an analysis of the anticipated effects of the targets and strategies,*, approved by the metropolitan planning organization and submitted for information purposes to the Governor at such times and in such manner as the Secretary shall establish.

(7) SELECTION OF PROJECTS FROM ILLUSTRATIVE LIST.—Notwithstanding paragraph (2)(C), a State or metropolitan planning organization shall not be required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (2)(C).

* * * * * * *

(k) TRANSPORTATION MANAGEMENT AREAS.—

(1) IDENTIFICATION AND DESIGNATION.—

(A) REQUIRED IDENTIFICATION.—* * *

* * * * * * *

(6) TRANSPORTATION GREENHOUSE GAS REDUCTION EFFORTS.—

(A) IN GENERAL.—*Within a metropolitan planning area serving a transportation management area, the transportation planning process under this section shall address transportation-related greenhouse gas emissions by including emission reduction targets and strategies to meet those targets.*

(B) ELIGIBLE ORGANIZATIONS.—

(i) MPOS WITHIN TMAS.—*All provisions and requirements of this section, including the requirements of the transportation greenhouse gas reduction efforts, shall apply to metropolitan planning organizations that also serve as transportation management areas.*

(ii) OTHER MPOS.—*A metropolitan planning organization that does not serve as a transportation management area—*

(I) may develop transportation greenhouse gas emission reduction targets and strategies to meet those targets; and

(II) if those targets and strategies are developed, shall be subject to all applicable provisions and requirements of this section and the Clean Energy Jobs and American Power Act, including requirements of the transportation greenhouse gas reduction efforts.

(C) ESTABLISHMENT OF TARGETS AND CRITERIA.—

(i) IN GENERAL.—*Not later than 2 years after the promulgation of the final regulations required under section 831 of the Clean Air Act, each metropolitan planning organization that also serves as a transportation management area shall develop surface transportation-related greenhouse gas emission reduction targets, as well as strategies to meet those targets, in consultation with State air agencies and Indian tribes as part of the metropolitan transportation planning process under this section.*

(ii) MULTIPLE DESIGNATIONS.—*If more than 1 metropolitan planning organization has been designated within a metropolitan area, each metropolitan planning organization shall coordinate with other metropolitan planning organizations in the same metropolitan area to develop the targets and strategies described in clause (i).*

(iii) MINIMUM REQUIREMENTS.—*Each metropolitan transportation plan developed by a metropolitan planning organization under clause (i) shall, within the plan, demonstrate progress in stabilizing and reducing transportation-related greenhouse gas emissions so as to contribute to the achievement of State targets pursuant to section 135(f)(9).*

(iv) REQUIREMENTS FOR TARGETS AND STRATEGIES.—*The targets and strategies developed under this subparagraph shall, at a minimum—*

(I) be based on the emission and travel demand models and related methodologies established in the final regulations required under section 831 of the Clean Air Act;

(II) inventory all sources of surface transportation-related greenhouse gas emissions;

(III) apply to those modes of surface transportation that are addressed in the planning process under this section;

(IV) be integrated and consistent with regional transportation plans and transportation improvement programs; and

(V) be selected through scenario analysis, and include, pursuant to the requirements of the transportation planning process under this section, transportation investment and management strategies that reduce greenhouse gas emissions from the transportation sector over the life of the plan, such as—

(aa) efforts to increase public transportation ridership, including through service improvements, capacity expansions, and access enhancement;

(bb) efforts to increase walking, bicycling, and other forms of nonmotorized transportation;

(cc) implementation of zoning and other land use regulations and plans to support infill, transit-oriented development, redevelopment, or mixed use development;

(dd) travel demand management programs (including carpool, vanpool, or car-share projects), transportation pricing measures, parking policies, and programs to promote telecommuting, flexible work schedules, and satellite work centers;

(ee) surface transportation system operation improvements, including intelligent transportation systems or other operational improvements to reduce long-term greenhouse gas emissions through reduced congestion and improved system management;

(ff) intercity passenger rail improvements;

(gg) intercity bus improvements;

(hh) freight rail improvements;

(ii) use of materials or equipment associated with the construction or maintenance of transportation projects that reduce greenhouse gas emissions;

(jj) public facilities for supplying electricity to electric or plug-in hybrid-electric vehicles; or

(kk) any other effort that demonstrates progress in reducing transportation-related greenhouse gas emissions in each metropolitan planning organization under this subsection.

(D) REVIEW AND APPROVAL.—*Not later than 180 days after the date of submission of a plan under this section—*

(i) the Secretary and the Administrator shall review the plan; and

(ii) the Secretary shall make a determination that the plan submitted by a metropolitan planning organization meets the requirements of subparagraph (C) if—

(I) the Secretary finds that a metropolitan planning organization has developed, submitted, and published the plan of the metropolitan planning organization pursuant to this section;

(II) the Secretary, in consultation with the Administrator, determines that the plan is likely to achieve the targets established by the metropolitan planning organization under this subsection; and

(III) the development of the plan complies with the minimum requirements established under clauses (iii) and (iv) of subparagraph (C).

(E) CERTIFICATION.—

(i) IN GENERAL.—*Only metropolitan planning organizations that meet the requirements of subparagraph (C) shall be eligible to receive performance grants under section 113(c).*

(ii) FAILURE TO COMPLY.—*Failure to comply with the requirements under subparagraph (C) shall not impact certification standards under paragraph (5).*

(7) DEFINITION OF METROPOLITAN PLANNING ORGANIZATION.—*In this subsection, the term 'metropolitan planning organization' means a metropolitan planning organization described in clause (i) or (ii) of paragraph (6)(B).*

(8) SCENARIO ANALYSIS.—*The term 'scenario analysis' means the use of a planning tool that—*

(A) develops a range of scenarios representing various combinations of transportation and land use strategies, and estimates of how each of those scenarios would perform in meeting the greenhouse gas emission reduction targets based on analysis of various forces (such as health, transportation, economic or environmental factors, and land use) that affect growth;

(B) may include features such as—

(i) the involvement of the general public, key stakeholders, and elected officials on a broad scale;

(ii) the creation of an opportunity for those participants to educate each other as to growth trends and trade-offs, as a means to incorporate values and feedback into future plans; and

(iii) the use of continuing efforts and ongoing processes; and

(C) may include key elements such as—

(i) identification of the driving forces behind planning decisions and outcomes;

(ii) determination of patterns of interaction;

(iii) creation of scenarios for discussion purposes;

(iv) analysis of implications;

(v) evaluation of scenarios; and

(vi) use of monitoring indicators.

* * * * * * *

Statewide transportation planning

(a) GENERAL REQUIREMENTS.—

(1) DEVELOPMENT OF PLANS AND PROGRAMS.—* * *

* * * * * * *

(d) SCOPE OF PLANNING PROCESS.—

(1) IN GENERAL.—Each State shall carry out a statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will—

(A) support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;

(B) increase the safety of the transportation system for motorized and nonmotorized users;

(C) increase the security of the transportation system for motorized and nonmotorized users;

(D) increase the accessibility and mobility of people and freight;

(E) protect and enhance the environment, promote energy conservation,*sustainability, and livability, reduce surface transportation-related greenhouse gas emissions and reliance on oil, adapt to the effects of climate change,* improve the quality of life*and public health*, and promote consistency between transportation improvements and State and local planned growth and economic development patterns*, including housing and land use patterns*;

* * * * * * *

(f) LONG-RANGE STATEWIDE TRANSPORTATION PLAN.—

(1) DEVELOPMENT.—Each State shall develop a long-range statewide transportation plan, with a minimum 20-year forecast period for all areas of the State, that provides for the development and implementation of the intermodal transportation system of the State.

(2) CONSULTATION WITH GOVERNMENTS.—

(A) METROPOLITAN AREAS.—The statewide transportation plan shall be developed for each metropolitan area in the State in cooperation with the metropolitan planning organization designated for the metropolitan area under section 134.

(B) NONMETROPOLITAN AREAS.—With respect to nonmetropolitan areas, the statewide transportation plan shall be developed in consultation with affected nonmetropolitan officials with responsibility for transportation. The Secretary shall not review or approve the consultation process in each State.

(C) INDIAN TRIBAL AREAS.—With respect to each area of the State under the jurisdiction of an Indian tribal government, the statewide transportation plan shall be developed in consultation with the tribal government and the Secretary of the Interior.

(D) CONSULTATION, COMPARISON, AND CONSIDERATION.—

(i) IN GENERAL.—The long-range transportation plan shall be developed[, as appropriate, in consultation] *in cooperation* with *State and local agencies and Indian tribes responsible for transportation, public transportation, air quality, and housing and in consultation with* State, tribal, and local agencies responsible for land use management, natural resources, environmental protection, conservation,*public health,* and historic preservation.

* * * * * * *

(3) PARTICIPATION BY INTERESTED PARTIES.—

(A) IN GENERAL.—In developing the statewide transportation plan, the State shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties with a reasonable opportunity to comment on the proposed plan.

(B) METHODS.—In carrying out subparagraph (A), the State shall, to the maximum extent practicable—

(i) hold any public meetings at convenient and accessible locations and times;

(ii) employ visualization techniques to describe plans; and

(iii) make public information available in electronically accessible format and means, such as the World Wide Web*and through the website of the State, including emission reduction targets and strategies developed under paragraph (9) and an analysis of the anticipated effects of the targets and strategies*, as appropriate to afford reasonable opportunity for consideration of public information under subparagraph (A).

* * * * * * *

(8) PUBLICATION OF LONG-RANGE TRANSPORTATION PLANS.—Each long-range transportation plan prepared by a State shall be published or otherwise made available, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.

(9) TRANSPORTATION GREENHOUSE GAS REDUCTION EFFORTS.—

(A) IN GENERAL.—*Within a State, the transportation planning process under this section, shall address transportation-related greenhouse gas emissions by including emission reduction targets and strategies to meet those targets.*

(B) ESTABLISHMENT OF TARGETS AND CRITERIA.—

(i) IN GENERAL.—*Not later than 2 years after the promulgation of the final regulations required under section 831 of the Clean Air Act, each State shall develop surface transportation-related greenhouse gas emission reduction targets, as well as strategies to meet those*

targets, in consultation with State air agencies and Indian tribes as part of the transportation planning process under this section.

(ii) MINIMUM REQUIREMENTS.—*Each transportation plan developed by a State under clause (i) shall, within the plan, demonstrate progress in stabilizing and reducing transportation-related greenhouse gas emissions in the State so as to contribute to the achievement of national goals pursuant to section 831(a)(1) of the Clean Air Act.*

(iii) REQUIREMENTS FOR TARGETS AND STRATEGIES.—*The targets and strategies developed under this subparagraph shall, at a minimum—*

(I) be based on the emission models and related methodologies established in the final regulations required under section 831 of the Clean Air Act;

(II) inventory all sources of surface transportation-related greenhouse gas emissions;

(III) apply to those modes of surface transportation that are addressed in the planning process under this section;

(IV) be integrated and consistent with statewide transportation plans and statewide transportation improvement programs; and

(V) be selected through scenario analysis (as defined in section 134(k)), and include, pursuant to the requirements of the transportation planning process under this section, transportation investment and management strategies that reduce greenhouse gas emissions from the transportation sector over the life of the plan, such as—

(aa) efforts to increase public transportation ridership, including through service improvements, capacity expansions, and access enhancement;

(bb) efforts to increase walking, bicycling, and other forms of nonmotorized transportation;

(cc) implementation of zoning and other land use regulations and plans to support infill, transit-oriented development, redevelopment, or mixed use development;

(dd) travel demand management programs (including carpool, vanpool, or car-share projects), transportation pricing measures, parking policies, and programs to promote telecommuting, flexible work schedules, and satellite work centers;

(ee) surface transportation system operation improvements, including intelligent transportation systems or other operational improvements to reduce congestion and improve system management;

(ff) intercity passenger rail improvements;

(gg) intercity bus improvements;

(hh) freight rail improvements;

(ii) use of materials or equipment associated with the construction or maintenance of transportation projects that reduce greenhouse gas emissions;

(jj) public facilities for supplying electricity to electric or plug-in hybrid-electric vehicles; or

(kk) any other effort that demonstrates progress in reducing transportation-related greenhouse gas emissions.

(C) COORDINATION AND CONSULTATION WITH PUBLIC AGENCIES.—*Transportation greenhouse gas targets and plans pursuant to this section shall be developed—*

(i) in coordination with—

(I) all metropolitan planning organizations covered by this section within the State; and

(II) transportation and air quality agencies within the State;

(ii) in consultation with representatives of State and local housing, economic development, and land use agencies; and

(iii) in consultation with Indian tribes contiguous to the State.

(D) ENFORCEMENT.—*Not later than 180 days after the date of submission of a plan under this section—*

(i) the Secretary and the Administrator shall review the plan; and

(ii) the Secretary shall make a determination that the plan submitted by a State meets the requirements of subparagraph (B) if—

(I) the Secretary finds that a State has developed, submitted, and published the plan pursuant to this section;

(II) the Secretary, in consultation with the Administrator, determines that the plan is likely to achieve the targets established by the State under this subsection; and

(III) the development of the plan complies with the minimum requirements established under clauses (ii) and (iii) of subparagraph (B).

(E) PLANNING FINDING.—

(i) IN GENERAL.—*Only States that meet the requirements of subparagraph (B) shall be eligible to receive performance grants under section 113(c).*

(ii) FAILURE TO COMPLY.—*Failure to comply with the requirements under subparagraph (B) shall not impact the planning finding under subsection (g)(7).*

* * * * * * *

TITLE 49, UNITED STATES CODE

* * * * * * *

SEC. 5303

Metropolitan transportation planning

(a) POLICY.—It is in the national interest to—

(1) encourage and promote the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight and foster economic growth and development within and between States and urbanized areas, while [minimizing]*reducing* transportation-related fuel consumption*, reliance on oil, impacts on the environment, transportation-related greenhouse gas emissions* and air pollution through metropolitan and statewide transportation planning processes identified in this chapter; and

* * * * * * *

(h) SCOPE OF PLANNING PROCESS.—

(1) IN GENERAL.—The metropolitan planning process for a metropolitan planning area under this section shall provide for consideration of projects and strategies that will—

(A) support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

(B) increase the safety of the transportation system for motorized and nonmotorized users;

(C) increase the security of the transportation system for motorized and nonmotorized users;

(D) increase the accessibility and mobility of people and for freight;

(E) protect and enhance the environment, promote energy conservation, *sustainability, and livability, reduce surface transportation-related greenhouse gas emissions and reliance on oil, adapt to the effects of climate change,* improve the quality of life *and public health*, and promote consistency between transportation improvements and State and local planned growth and economic development patterns*, including housing and land use patterns*;

* * * * * * *

(i) DEVELOPMENT OF TRANSPORTATION PLAN.—

(1) IN GENERAL.—* * *

* * * * * * *

(4) CONSULTATION.—

(A) IN GENERAL.—In each metropolitan area, the metropolitan planning organization shall [consult, as appropriate,]*cooperate* with State and local agencies responsible for *transportation, public transportation, air quality, and housing, and shall consult, as appropriate, with State and local agencies and Indian tribes responsible for* land use management, natural resources, environmental protection, conservation, *public health,* and historic preservation concerning the development of a long-range transportation plan.

* * * * * * *

(5) PARTICIPATION BY INTERESTED PARTIES.—

(A) IN GENERAL.—Each metropolitan planning organization shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan.

(B) CONTENTS OF PARTICIPATION PLAN.—A participation plan—

(i) shall be developed in consultation with all interested parties; and

(ii) shall provide that all interested parties have reasonable opportunities to comment on the contents of the transportation plan.

(C) METHODS.—In carrying out subparagraph (A), the metropolitan planning organization shall, to the maximum extent practicable—

(i) hold any public meetings at convenient and accessible locations and times;

(ii) employ visualization techniques to describe plans; and

(iii) make public information available in electronically accessible format and means, such as the World Wide Web *and through the website of the metropolitan planning organization, including emission reduction targets and strategies developed under subsection (k)(6), including an analysis of the anticipated effects of the targets and strategies,* as appropriate to afford reasonable opportunity for consideration of public information under subparagraph (A).

* * * * * * *

(k) TRANSPORTATION MANAGEMENT AREAS.—* * *

* * * * * * *

(5) CERTIFICATION.—

(A) IN GENERAL.—The Secretary shall—

(i) ensure that the metropolitan planning process of a metropolitan planning organization serving a transportation management area is being carried out in accordance with applicable provisions of Federal law; and

(ii) subject to subparagraph (B), certify, not less often than once every 4 years, that the requirements of this paragraph are met with respect to the metropolitan planning process.

(B) REQUIREMENTS FOR CERTIFICATION.—The Secretary may make the certification under subparagraph (A) if—

(i) the transportation planning process complies with the requirements of this section and other applicable requirements of Federal law; and

(ii) there is a TIP for the metropolitan planning area that has been approved by the metropolitan planning organization and the Governor.

(C) EFFECT OF FAILURE TO CERTIFY.—

(i) WITHHOLDING OF PROJECT FUNDS.—If a metropolitan planning process of a metropolitan planning organization serving a transportation management area is not certified, the Secretary may withhold up to 20 percent of the funds attributable to the metropolitan planning area of the metropolitan planning organization for projects funded under this chapter and title 23.

(ii) RESTORATION OF WITHHELD FUNDS.—The withheld funds shall be restored to the metropolitan planning area at such time as the metropolitan planning process is certified by the Secretary.

(D) REVIEW OF CERTIFICATION.—In making certification determinations under this paragraph, the Secretary shall provide for public involvement appropriate to the metropolitan area under review.

(6) TRANSPORTATION GREENHOUSE GAS REDUCTION EFFORTS.—

(A) IN GENERAL.—*Within a metropolitan planning area serving a transportation management area, the transportation planning process under this section shall address transportation-related greenhouse gas emissions by including emission reduction targets and strategies to meet those targets.*

(B) ELIGIBLE ORGANIZATIONS.—

(i) IN GENERAL.—*The requirements of the transportation greenhouse gas reduction efforts shall apply only to metropolitan planning organizations within a transportation management area.*

(ii) DEVELOPMENT OF PLAN.—*A metropolitan planning organization that does not serve as a transportation management area—*

(I) may develop transportation greenhouse gas emission reduction targets and strategies to meet those targets; and

(II) if those targets and strategies are developed, shall be subject to all provisions and requirements of this section, including requirements of the transportation greenhouse gas reduction efforts.

(C) ESTABLISHMENT OF TARGETS AND CRITERIA.—

(i) IN GENERAL.—*Not later than 2 years after the promulgation of the final regulations required under section 831 of the Clean Air Act, each metropolitan planning organization shall develop surface transportation-related greenhouse gas emission reduction targets, as well as strategies to meet those targets, in consultation with State air agencies and Indian tribes as part of the metropolitan transportation planning process under this section.*

(ii) MULTIPLE DESIGNATIONS.—*If more than 1 metropolitan planning organization has been designated within a metropolitan area, each metropolitan planning organization shall coordinate with other metropolitan planning organizations in the same metropolitan area to develop the targets and strategies described in clause (i).*

(iii) MINIMUM REQUIREMENTS.—*Each metropolitan transportation plan developed by a metropolitan planning organization under clause (i) shall, within the plan, demonstrate progress in stabilizing and reducing transportation-related greenhouse gas emissions so as to contribute to the achievement of State targets pursuant to section 135(f)(9) of title 23.*

(iv) REQUIREMENTS FOR TARGETS AND STRATEGIES.—*The targets and strategies developed under this subparagraph shall, at a minimum—*

(I) be based on the emission models and related methodologies established in the final regulations required under section 831 of the Clean Air Act;

(II) inventory all sources of surface transportation-related greenhouse gas emissions;

(III) apply to those modes of surface transportation that are addressed in the planning process under this section;

(IV) be integrated and consistent with regional transportation plans and transportation improvement programs; and

(V) be selected through scenario analysis (as defined in section 134(k) of title 23), and include, pursuant to the requirements of the transportation planning process under this section, transportation investment and management strategies that reduce greenhouse gas emissions from the transportation sector over the life of the plan, such as—

(aa) efforts to increase public transportation ridership, including through service improvements, capacity expansions, and access enhancement;

(bb) efforts to increase walking, bicycling, and other forms of nonmotorized transportation;

(cc) implementation of zoning and other land use regulations and plans to support infill, transit-oriented development, redevelopment, or mixed use development;

(dd) travel demand management programs (including carpool, vanpool, or car-share projects), transportation pricing measures, parking policies, and programs to promote telecommuting, flexible work schedules, and satellite work centers;

(ee) surface transportation system operation improvements, including intelligent transpor-

tation systems or other operational improvements to reduce long-term greenhouse gas emissions through reduced congestion and improved system management;

(ff) intercity passenger rail improvements;

(gg) intercity bus improvements;

(hh) freight rail improvements;

(ii) use of materials or equipment associated with the construction or maintenance of transportation projects that reduce greenhouse gas emissions;

(jj) public facilities for supplying electricity to electric or plug-in hybrid-electric vehicles; or

(kk) any other effort that demonstrates progress in reducing transportation-related greenhouse gas emissions in each metropolitan planning organization under this subsection.

(D) REVIEW AND APPROVAL.—*Not later than 180 days after the date of submission of a plan under this section—*

(i) the Secretary and the Administrator shall review the plan; and

(ii) the Secretary shall make a determination that the plan submitted by a metropolitan planning organization meets the requirements of subparagraph (C) if—

(I) the Secretary finds that a metropolitan planning organization has developed, submitted, and published the plan of the metropolitan planning organization pursuant to this section;

(II) the Secretary, in consultation with the Administrator, determines that the plan is likely to achieve the targets established by the metropolitan planning organization under this subsection; and

(III) the development of the plan complies with the minimum requirements established under clauses (iii) and (iv) of subparagraph (C).

(E) CERTIFICATION.—

(i) IN GENERAL.—*Only metropolitan planning organizations that meet the requirements of subparagraph (C) shall be eligible to receive performance grants under section 113(c).*

(ii) FAILURE TO COMPLY.—*Failure to comply with the requirements under subparagraph (C) shall not impact certification standards under paragraph (5).*

(7) DEFINITION OF METROPOLITAN PLANNING ORGANIZATION.—In this subsection, the term 'metropolitan planning organization' means a metropolitan planning organization described in clause (i) or (ii) of paragraph (6)(B).

SEC. 5304

Statewide transportation planning

(a) GENERAL REQUIREMENTS.—

(1) DEVELOPMENT OF PLANS AND PROGRAMS.—* * *

* * * * * * *

(d) SCOPE OF PLANNING PROCESS.—

(1) IN GENERAL.—Each State shall carry out a statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will—

(A) support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;

(B) increase the safety of the transportation system for motorized and nonmotorized users;

(C) increase the security of the transportation system for motorized and nonmotorized users;

(D) increase the accessibility and mobility of people and freight;

(E) protect and enhance the environment, promote energy conservation, *sustainability, and livability, reduce surface transportation-related greenhouse gas emissions and reliance on oil, adapt to the effects of climate change,* improve the quality of life *and public health*, and promote consistency between transportation improvements and State and local planned growth and economic development patterns*, including housing and land use patterns*;

* * * * * * *

(f) LONG-RANGE STATEWIDE TRANSPORTATION PLAN.—

(1) DEVELOPMENT.—Each State shall develop a long-range statewide transportation plan, with a minimum 20-year forecast period for all areas of the State, that provides for the development and implementation of the intermodal transportation system of the State.

(2) CONSULTATION WITH GOVERNMENTS.—

(A) METROPOLITAN AREAS.—The statewide transportation plan shall be developed for each metropolitan area in the State in cooperation with the metropolitan planning organization designated for the metropolitan area under section 5303.

(B) NONMETROPOLITAN AREAS.—With respect to nonmetropolitan areas, the statewide transportation plan shall be developed in consultation with affected nonmetropolitan officials with responsibility for transportation. The Secretary shall not review or approve the consultation process in each State.

(C) INDIAN TRIBAL AREAS.—With respect to each area of the State under the jurisdiction of an Indian tribal government, the statewide transportation plan shall be developed in consultation with the tribal government and the Secretary of the Interior.

(D) CONSULTATION, COMPARISON, AND CONSIDERATION.—

(i) IN GENERAL.—The long-range transportation plan shall be developed**[**, as appropriate, in consultation**]***in cooperation* with *State and local agencies and Indian tribes responsible for transportation, public transportation, air quality, and housing and in consultation with* State, tribal, and local agencies responsible for

land use management, natural resources, environmental protection, conservation, *public health,* and historic preservation.

* * * * * * *

(3) PARTICIPATION BY INTERESTED PARTIES.—

(A) IN GENERAL.—In developing the statewide transportation plan, the State shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, providers of freight transportation services, and other interested parties with a reasonable opportunity to comment on the proposed plan.

(B) METHODS.—In carrying out subparagraph (A), the State shall, to the maximum extent practicable—

(i) hold any public meetings at convenient and accessible locations and times;

(ii) employ visualization techniques to describe plans; and

(iii) make public information available in electronically accessible format and means, such as the World Wide Web *and through the website of the State, including emission reduction targets and strategies developed under paragraph (9) and an analysis of the anticipated effects of the targets and strategies*, as appropriate to afford reasonable opportunity for consideration of public information under subparagraph (A).

* * * * * * *

(8) PUBLICATION OF LONG-RANGE TRANSPORTATION PLANS.—Each long-range transportation plan prepared by a State shall be published or otherwise made available, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.

(9) TRANSPORTATION GREENHOUSE GAS REDUCTION EFFORTS.—

(A) IN GENERAL.—*Within a State, the transportation planning process under this section, shall address transportation-related greenhouse gas emissions by including emission reduction targets and strategies to meet those targets.*

(B) ESTABLISHMENT OF TARGETS AND CRITERIA.—

(i) IN GENERAL.—*Not later than 2 years after the promulgation of the final regulations required under section 831 of the Clean Air Act, each State shall develop surface transportation-related greenhouse gas emission reduction targets, as well as strategies to meet those targets, in consultation with State air agencies and Indian tribes as part of the transportation planning process under this section.*

(ii) MINIMUM REQUIREMENTS.—*Each transportation plan developed by a State under clause (i) shall, within the plan, demonstrate progress in stabilizing and re-*

ducing transportation-related greenhouse gas emissions in the State so as to contribute to the achievement of national targets pursuant to section 831(a)(1) of the Clean Air Act.

(iii) REQUIREMENTS FOR TARGETS AND STRATEGIES.—*The targets and strategies developed under this subparagraph shall, at a minimum—*

(I) be based on the emission models and related methodologies established in the final regulations required under section 831 of the Clean Air Act;

(II) inventory all sources of surface transportation-related greenhouse gas emissions;

(III) apply to those modes of surface transportation that are addressed in the planning process under this section;

(IV) be integrated and consistent with statewide transportation plans and statewide transportation improvement programs; and

(V) be selected through scenario analysis (as defined in section 134(k) of title 23), and include, pursuant to the requirements of the transportation planning process under this section, transportation investment and management strategies that reduce greenhouse gas emissions from the transportation sector over the life of the plan, such as—

(aa) efforts to increase public transportation ridership, including through service improvements, capacity expansions, and access enhancement;

(bb) efforts to increase walking, bicycling, and other forms of nonmotorized transportation;

(cc) implementation of zoning and other land use regulations and plans to support infill, transit-oriented development, redevelopment, or mixed use development;

(dd) travel demand management programs (including carpool, vanpool, or car-share projects), transportation pricing measures, parking policies, and programs to promote telecommuting, flexible work schedules, and satellite work centers;

(ee) surface transportation system operation improvements, including intelligent transportation systems or other operational improvements to reduce congestion and improve system management;

(ff) intercity passenger rail improvements;

(gg) intercity bus improvements;

(hh) freight rail improvements;

(ii) use of materials or equipment associated with the construction or maintenance of transportation projects that reduce greenhouse gas emissions;

(jj) public facilities for supplying electricity to electric or plug-in hybrid-electric vehicles; or

(kk) any other effort that demonstrates progress in reducing transportation-related greenhouse gas emissions.

(C) COORDINATION AND CONSULTATION WITH PUBLIC AGENCIES.—*Transportation greenhouse gas targets and plans pursuant to this section shall be developed—*

(i) in coordination with—

(I) all metropolitan planning organizations covered by this section within the State; and

(II) transportation and air quality agencies within the State;

(ii) in consultation with representatives of State and local housing, economic development, and land use agencies; and

(iii) in consultation with Indian tribes contiguous to the State.

(D) ENFORCEMENT.—*Not later than 180 days after the date of submission of a plan under this section—*

(i) the Secretary and the Administrator shall review the plan; and

(ii) the Secretary shall make a determination that the plan submitted by a State meets the requirements of subparagraph (B) if—

(I) the Secretary finds that a State has developed, submitted, and published the plan pursuant to this section;

(II) the Secretary, in consultation with the Administrator, determines that the plan is likely to achieve the targets established by the State under this subsection; and

(III) the development of the plan complies with the minimum requirements established under clauses (ii) and (iii) of subparagraph (B).

(E) PLANNING FINDING.—

(i) IN GENERAL.—*Only States that meet the requirements of subparagraph (B) shall be eligible to receive performance grants under section 113(c).*

(ii) FAILURE TO COMPLY.—Failure to comply with the requirements under subparagraph (B) shall not impact the planning finding under subsection (g)(7).

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SEC. 32919

Preemption

(a) GENERAL.—When an average fuel economy standard prescribed under this chapter is in effect, a State or a political subdivision of a State may not adopt or enforce a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter.

(b) REQUIREMENTS MUST BE IDENTICAL.—When a requirement under section 32908 of this title is in effect, a State or a political subdivision of a State may adopt or enforce a law or regulation on disclosure of fuel economy or fuel operating costs for an automobile covered by section 32908 only if the law or regulation is identical to that requirement.

(c) STATE AND POLITICAL SUBDIVISION AUTOMOBILES.—A State or a political subdivision of a State may prescribe requirements for fuel economy for automobiles obtained for its own use.

(d) TAXICABS.—Notwithstanding subsection (a), a State or political subdivision of a State may prescribe requirements for fuel economy for taxicabs and other automobiles if such requirements are at least as stringent as applicable Federal requirements and if such taxicabs and other automobiles—

(1) are automobiles that are capable of transporting not more than 10 individuals, including the driver;

(2) are commercially available or are designed and manufactured pursuant to a contract with such State or political subdivision of such State;

(3) are operated for hire pursuant to an operating or regulatory license, permit, or other authorization issued by such State or political subdivision of such State;

(4) provide local transportation for a fare determined on the basis of the time or distance traveled or a combination of time and distance traveled; and

(5) do not exclusively provide transportation to and from airports.

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SAFE DRINKING WATER ACT

SEC. 1400.

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SEC. 1421. (a)(1) The Administrator shall publish proposed regulations for State underground injection control programs within 180 days after the date of enactment of this title. Within 180 days after publication of such proposed regulations, he shall promulgate such regulations with such modifications as he deems appropriate. Any regulation under this subsection may be amended from time to time.

(2) * * *

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(e) CARBON DIOXIDE GEOLOGICAL STORAGE WELLS.—

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

(2) FINANCIAL RESPONSIBILITY.—

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

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

(i) Insurance.

(ii) Guarantee.

(iii) Trust.

(iv) Standby trust.

(v) Surety bond.

(vi) Letter of credit.

(vii) Qualification as a self-insurer.

(viii) Any other method satisfactory to the Administrator.

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PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965

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TITLE II—GRANTS FOR PUBLIC WORKS AND ECONOMIC DEVELOPMENT

Sec. 201* * *

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SEC. 218. BRIGHTFIELDS DEMONSTRATION PROGRAM.

(a) DEFINITION OF BRIGHTFIELD SITE.—In this section, the term "brightfield site" means a brownfield site that is redeveloped through the incorporation of 1 or more solar energy technologies.

(b) DEMONSTRATION PROGRAM.—On the application of an eligible recipient, the Secretary may make a grant for a project for the development of a brightfield site if the Secretary determines that the project will—

(1) use 1 or more solar energy technologies to develop abandoned or contaminated sites for commercial use; and

(2) improve the commercial and economic opportunities in the area in which the project is located.

(c) SAVINGS CLAUSE.—To the extent that any portion of a grant awarded under subsection (b) involves remediation, the remediation shall be subject to section 612.

(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $5,000,000 for each of fiscal years 2004 through 2008, to remain available until expended.

SEC. 219. ECONOMIC DEVELOPMENT CLIMATE CHANGE FUND.

(a) IN GENERAL.—On the application of an eligible recipient, the Secretary may provide technical assistance, make grants, enter into contracts, or otherwise provide amounts for projects—

(1) to promote energy efficiency to enhance economic competitiveness;

(2) to increase the use of renewable energy resources to support sustainable economic development and job growth;

(3) to support the development of conventional energy resources to produce alternative transportation fuels, electricity and heat;

(4) to develop energy efficient or environmentally sustainable infrastructure;

(5) to promote environmentally sustainable economic development practices and models;

(6) to support development of energy efficiency and alternative energy development plans, studies or analysis, including enhancement of new and existing Comprehensive Economic Development Strategies funded under this Act; and

(7) to supplement other Federal grants, loans, or loan guarantees for purposes described in paragraphs (1) through (6).

(b) FEDERAL SHARE.—The Federal share of the cost of any project carried out under this section shall not exceed 80 percent, except that the Federal share of a Federal grant, loan, or loan guarantee provided under subsection (a)(7) may be 100 percent.

(c) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section $50,000,000 for each of fiscal years 2009 through 2013, to remain available until expended.

ENERGY POLICY ACT OF 2005

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SEC. 791. DEFINITIONS.

In this subtitle:

(1) ADMINISTRATOR.—The term "Administrator" means the Administrator of the Environmental Protection Agency.

(2) CERTIFIED ENGINE CONFIGURATION.—The term "certified engine configuration" means a new, rebuilt, or remanufactured engine configuration—

(A) that has been certified or verified by—

(i) the Administrator; or

(ii) the California Air Resources Board;

(B) that meets or is rebuilt or remanufactured to a more stringent set of engine emission standards, as determined by the Administrator; and

(C) in the case of a certified engine configuration involving the replacement of an existing engine or vehicle, an engine configuration that replaced an engine that was—

(i) removed from the vehicle; and

(ii) returned to the supplier for remanufacturing to a more stringent set of engine emissions standards or for scrappage.

(3) ELIGIBLE ENTITY.—The term "eligible entity" means—

(A) a regional, State, local, or tribal agency or port authority with jurisdiction over transportation or air quality; [and]

(B) a nonprofit organization or institution that—

(i) represents or provides pollution reduction or educational services to persons or organizations that own or operate diesel fleets; or

(ii) has, as its principal purpose, the promotion of transportation or air quality[.]*; and*

(C) any person that is the owner of record of a diesel fleet.

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SEC. 792. NATIONAL GRANT AND LOAN PROGRAMS.

(a) IN GENERAL.—The Administrator shall use 70 percent of the funds made available to carry out this subtitle for each fiscal year to provide grants and low-cost revolving loans, as determined by the Administrator, on a competitive basis, to eligible entities to achieve significant reductions in diesel emissions in terms of—

(1)* * *

* * * * * * *

(d) USE OF [FUNDS.—

(1) IN GENERAL.—An eligible entity] *FUNDS.—An eligible entity* may use a grant or loan provided under this section to fund the costs of—

[(A)]*(1)* a retrofit technology (including any incremental costs of a repowered or new diesel engine) that significantly reduces emissions through development and implementation of a certified engine configuration, verified technology, or emerging technology for—

[(i)]*(A)* a bus;

[(ii)]*(B)* a medium-duty truck or a heavy-duty truck;

[(iii)]*(C)* a marine engine;

[(iv)]*(D)* a locomotive; or

[(v)]*(E)* a nonroad engine or vehicle used in—

[(I)]*(i)* construction;

[(II)]*(ii)* handling of cargo (including at a port or airport);

[(III)]*(iii)* agriculture;

[(IV)]*(iv)* mining; or

[(V)]*(v)* energy production; or

[(B)]*(2)* programs or projects to reduce long-duration idling using verified technology involving a vehicle or equipment described in [subparagraph (A)]*paragraph (1)*.

[(2) REGULATORY PROGRAMS.—

[(A) IN GENERAL.—Notwithstanding paragraph (1), no grant or loan provided under this section shall be used to fund the costs of emissions reductions that are mandated under Federal, State or local law.

[(B) MANDATED.—For purposes of subparagraph (A), voluntary or elective emission reduction measures shall not be considered "mandated", regardless of whether the reductions are included in the State implementation plan of a State.]

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SEC. 795. OUTREACH AND INCENTIVES.

(a) DEFINITION OF ELIGIBLE TECHNOLOGY.—In this section, the term "eligible technology" means—

(1) a verified technology; or

(2) an emerging technology.

(b) TECHNOLOGY TRANSFER PROGRAM.—

(1) IN GENERAL.—The Administrator shall establish a program under which the Administrator—

(A) informs stakeholders of the benefits of eligible technologies; and

(B) develops nonfinancial incentives to promote the use of eligible technologies.

(2) ELIGIBLE STAKEHOLDERS.—Eligible stakeholders under this section include—

(A) equipment owners and operators;

(B) emission and pollution control technology manufacturers;

(C) engine and equipment manufacturers;

(D) State and local officials responsible for air quality management;

(E) community organizations; and

(F) public health, educational, and environmental organizations.

(c) STATE IMPLEMENTATION PLANS.—The Administrator shall develop appropriate guidance to provide credit to a State for emission reductions in the State created by the use of eligible technologies through a State implementation plan under section 110 of the Clean Air Act (42 U.S.C. 7410).

(d) INTERNATIONAL MARKETS.—The Administrator, in coordination with the Department of Commerce and industry stakeholders, shall inform foreign countries with air quality problems of the potential of technology developed or used in the United States to provide emission reductions in those countries.

SEC. 795A. BLACK CARBON REDUCTION GRANT PROGRAM.

(a) DEFINITIONS.—In this section:

(1) ADMINISTRATOR.—The term 'Administrator' means the Administrator of the Environmental Protection Agency.

(2) BLACK CARBON.—The term 'black carbon' means a primary light-absorbing aerosol, as determined by the Administrator based on the best available science.

(3) DIESEL PARTICULATE FILTER.—The term 'diesel particulate filter' means a pollution control technology that reduces at least 85 percent of black carbon, as verified by the Administrator or the California Air Resources Board.

(4) ELIGIBLE ENTITY.—The term 'eligible entity' means a person that is the owner of record of a heavy duty vehicle.

(5) HEAVY DUTY VEHICLE.—The term 'heavy duty vehicle' has the meaning given the term in section 202(b)(3) of the Clean Air Act (42 U.S.C. 7521(b)(3)).

(6) PROGRAM.—The term 'program' means the Black Carbon Reduction Program established under this section.

(b) ESTABLISHMENT.—The Administrator shall establish a voluntary grant program, to be known as the 'Black Carbon Reduction Program'—

(1) to cost effectively mitigate the adverse consequences of global warming by means of early action to reduce black carbon emissions from diesel-powered heavy-duty vehicles placed in service prior to 2007; and

(2) under which the Administrator, in accordance with this section (including regulations promulgated under subsection (g)), shall authorize the provision of grants in accordance with subsection (c) to cover 100 percent of the cost of purchasing and installing diesel particulate filters on heavy duty vehicles.

(c) PROGRAM SPECIFICATIONS.—

(1) IN GENERAL.—A grant may be issued under the program only to cover the costs of the purchase and installation of a diesel particulate filter.

(2) MAXIMUM AMOUNT.—The total amount of grants issued for a fiscal year under the program may not exceed the amounts made available for the program for the fiscal year under subsection (h).

(d) EVALUATION AND REPORT.—

(1) IN GENERAL.—Not later than 2 years after the date of enactment of this section and biennially thereafter, the Administrator shall submit to Congress a report evaluating the implementation of the program.

(2) INCLUSIONS.—The report shall include a description of—

(A) the total number of grant applications received;

(B) the total dollar value of all grants issued;

(C) the estimated benefits of grants provided under the program, including estimates of the total number of tons of black carbon reduced, cost-effectiveness, and cost-benefits; and

(D) any other information the Administrator considers to be appropriate.

(e) EXCLUSION OF GRANTS FROM INCOME.—A grant issued under the program shall not be considered gross income of the purchaser of technology for purposes of the Internal Revenue Code of 1986.

(f) EFFECT OF SECTION.—Nothing in this section affects any authority under the Clean Air Act (42 U.S.C. 7401 et seq.) as in existence on the day before the date of enactment of this section.

(g) REGULATIONS.—

(1) IN GENERAL.—As soon as practicable after the date of enactment of this section, the Administrator shall promulgate regulations to implement the program.

(2) REQUIREMENTS.—The regulations promulgated under paragraph (1) shall—

(A) establish streamlined procedures for the provision of grants to eligible entities participating in the program for the amount of the purchase and installation of diesel particulate filters as soon as practicable, but not later than 30 days after the date of submission of an application for a grant;

(B) include a list of diesel particulate filters the purchase and installation of which are eligible to be funded through the program; and

(C) include a list of vehicles by model year that are eligible to be retrofitted under the program.

(h) FUNDING.—The Administrator shall use to carry out the program all of the funding provided for each fiscal year under section 201(g)(1) of division B of the Clean Energy Jobs and American Power Act.

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SEC. 797. AUTHORIZATION OF APPROPRIATIONS.

There is authorized to be appropriated to carry out this subtitle $200,000,000 for each of fiscal years 2007 through [2011]*2021*, to remain available until expended.

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