

U.S. HOUSE OF REPRESENTATIVES APPROVES LANDMARK CLIMATE CHANGE LEGISLATION

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Table of Contents

Executive Summary	1
Section I. Current Regulatory Context	4
A. State, Regional and Local Patchwork	4
B. Federal Agency Action	4
C. International Context	5
Section II. Key Features	5
A. Cap-and-Trade System	5
B. Combined Efficiency and Renewable Electricity Standard	11
C. Emission Performance Standards for Coal-Fueled Power Plants and Carbon Capture and Sequestration Technology	14
D. International Reserve Allowance Program – the Import Tariff Provision	16
Section III. The Road Ahead	16
References	17

Executive Summary

On June 26, 2009, the U.S. House of Representatives passed the American Clean Energy and Security Act (the “**Act**”) by a vote of 219 to 212. The Act is the first federal climate change bill to pass in either chamber of the U.S. Congress. Despite this historic passage, which was supported by a broad range of major corporations and environmental groups, it is unclear whether a final bill can be crafted that will satisfy enough of the diverse and politically powerful stakeholders to be ultimately adopted into law, particularly given the current state of the economy.

The cornerstone of this complex and very long (more than 1,400 page) Act is the carbon cap-and-trade system, which is intended to reduce over time annual U.S. greenhouse gas emissions. In addition, the Act addresses a host of other matters also intended to reduce greenhouse gas emissions, in part by reducing the nation’s dependence on traditional energy sources. These covered topics include renewable electricity generation mandates, promotion of carbon capture and sequestration technology, mandatory energy efficiency savings, and projects promoting clean transportation, improved electricity transmission and smart grid technology.

Below we briefly summarize a few key provisions of the Act. After this executive summary, we describe the current overall regulatory context (Section I), provide a more detailed summary of a few of the most significant parts of the Act (Section II) and set forth the likely next steps in the legislative process (Section III). The derivatives portion of the Act’s cap-and-trade system is summarized in an earlier Davis Polk memorandum [“Derivatives Provisions in the American Clean Energy and Security Act of 2009.”](#)

Cap-and-Trade System

A cap-and-trade system sets an aggregate limit on the amount of greenhouse gases that may be emitted annually by certain capped sources. The Act's limit is set as a percentage reduction below actual 2005 emission levels from such sources and grows more restrictive over time. Subject to the overall limit, capped sources may buy and sell the right to emit greenhouse gases.

Certain environmental groups and many industrialized nations have criticized the Act's cap-and-trade provisions, claiming the system would not lead to any meaningful reduction in greenhouse gas emissions due to its (i) excessive distribution of free allowances; (ii) liberal offsetting provisions; and (iii) very modest emission reduction targets compared to both the reductions promised by the Obama campaign in 2008 and to the 25% to 40% reductions (below a 1990 baseline) advocated by certain scientists and many in the international environmental community.

- Cap. Overall annual greenhouse gas reduction targets of 3% by 2012; 17% by 2020; 42% by 2030; and 83% by 2050, each as compared to 2005 emissions levels.
- Subject Industries. "Capped sources" would generally include industries such as electric generators, fuel importers and producers and stationary sources that emit 25,000 tons or more of carbon dioxide equivalents.¹
- Allowances. Certain capped sources receive for free a portion of their rights to emit greenhouse gases during the early years. The free allowances decline gradually in subsequent years.²
- Offsets. Capped sources may also buy (or conduct projects that would entitle them to) international and domestic offset credits which would allow them to emit greenhouse gases. Rather than set the amount of offset credits as a percentage of a baseline, such as 2005 emissions, the Act would allow capped sources to "offset" up to two billion tons of annual carbon dioxide equivalent emissions with these credits. These offset credits would be in addition to emission allowances and therefore could permit aggregate greenhouse gas emissions from capped sources to far exceed the cap.³ However, no single emitter may "offset" more than a statutorily prescribed percentage (which ranges from about 30% in 2012 to approximately 66% in 2050) of its emissions in a given year. The U.S. Environmental Protection Agency (the "EPA") would determine the validity of all offset projects and issue offset credits other than projects and credits related to domestic agriculture or forestry, which would be handled by the U.S. Department of Agriculture.

¹ Because individual greenhouse gases vary in their heat-trapping potency, they are measured in units of carbon dioxide equivalents.

² It has been widely reported that certain industries will receive for free until as late as 2025 close to 100% of the emission allowances they require to operate. However, the scope of allowance recipients has not been fully delineated, so it is impossible to verify from the Act that this is correct.

³ The two billion tons in offset credits is equivalent to approximately 36% to 193% (from 2016 to 2050) of additional annual greenhouse gas emissions in excess of the cap. These percentages are based upon the amount of greenhouse gas emissions to be covered by emission allowances declining from 5,482 million tons of annual carbon dioxide equivalent emissions in 2016 to 1,035 million tons of annual carbon dioxide equivalent emissions in 2050.

- **Greenhouse Gas Registry.** All capped sources and various other entities would be required to measure and report to the EPA their greenhouse gas emissions from 2007 onwards. All reported data would be publicly available. This registry overlaps with, but is not identical to, a greenhouse gas registry proposed by the EPA earlier this year.

The proposed legislation, although likely to change significantly as it is considered by the Senate, represents a potentially politically viable compromise, and covers many issues that are highly likely to be addressed in one form or another by future federal law or regulation. Companies and investors would therefore be well-served to actively focus on the Act's implications for their businesses.

It is important to note that, even in the absence of any final federal law, greenhouse gas emissions are likely to be regulated at the federal level in the near future. If a new federal law is not passed, the EPA plans to regulate emissions under the U.S. Clean Air Act. It is unclear how exactly the EPA would approach greenhouse gas regulation under the Clean Air Act, but its options range from a market-based cap-and-trade system to a "command and control" approach more akin to California's AB32 program. Many believe the Clean Air Act is ill-suited for regulating ubiquitous substances such as carbon dioxide, however, and the prospect of EPA regulation under the Clean Air Act has become one of the more significant justifications cited for passing the Act or other federal climate change legislation.

For more details on the Act's cap-and-trade provisions, see [Section II.A.](#)

Combined Efficiency and Renewable Electricity Standard

The Act would require certain electric utilities to meet an increasing portion of their annual electricity demand, starting at 6% in 2012, through a combination of energy-saving measures and electricity generation from renewable sources.

Covered utilities could satisfy this Combined Efficiency and Renewable Electricity Standard either by generating renewable electricity or energy savings themselves, or by purchasing the right to claim renewable generation or energy savings from third parties with excess generation or savings. Environmental groups and some in the renewable energy industry have criticized the Act's combined standard as being too weak and even harmful, as it might inhibit the continued development of more stringent state efficiency and renewable generation standards.

For more details, see [Section II.B.](#)

Emission Performance Standards for Coal-Fueled Power Plants and Carbon Capture and Sequestration Technology

The Act would additionally impose mandatory carbon dioxide emission performance standards on certain coal-fueled power plants. It also would establish a two-tiered program to promote the commercial development of technologies to capture and sequester carbon dioxide emissions that would otherwise be released into the atmosphere.

For more details, see [Section II.C.](#)

International Reserve Allowance Program – the Import Tariff Provision

The Act levies a controversial tariff on U.S. imports of products from certain countries that do not sufficiently limit greenhouse gases. There appear to be significant questions as to whether this new tariff violates trade law or agreements, and both President Obama and China's central government have spoken out against this provision. Experts have also questioned whether the numerous free allowances distributed to capped sources, as well as the distribution under the Act of over \$2 billion to auto makers in the United States to develop plug-in electric vehicles, also violate world trade rules.

For more details, see [Section II.D](#).

Section I. Current Regulatory Context

Following is a high-level summary of the current state of regulation which is helpful in understanding the local, federal and international impact the Act may have if enacted into law.

A. State, Regional and Local Patchwork

In the absence of federal regulation, certain U.S. regional, state and local governments have adopted a patchwork of programs aimed at reducing greenhouse gas emissions. Having evolved independently, these programs employ a variety of techniques ranging from cap-and-trade to renewable energy mandates to emission performance standards. For companies operating in multiple jurisdictions, the sheer variety of programs is a significant administrative burden, and meeting the substantive requirements of each individual regime can be daunting. The most prominent of these state and regional laws are currently California's AB32 and the ten-state Regional Greenhouse Gas Initiative covering much of New England and the Eastern seaboard. In addition, the Western Climate Initiative and the Midwestern Greenhouse Gas Reduction Accord encompass an additional thirteen states and are expected to come into effect as early as 2012.

B. Federal Agency Action

As noted earlier, the EPA has taken steps toward directly regulating greenhouse gas emissions under the existing Clean Air Act. In April 2009, the EPA proposed making a determination under the Clean Air Act that greenhouse gas emissions contribute to air pollution which may endanger public health or welfare. If finalized, this so-called "endangerment finding" would enable the EPA, without Congressional approval, to regulate greenhouse gas emissions under the Clean Air Act.⁴ The public comment period expired last month, and the EPA is now finalizing its determination. Once finalized, the endangerment finding would not by itself regulate emissions, but would permit the EPA to subsequently promulgate greenhouse gas emission regulations.

In addition, in April 2009, the EPA proposed a comprehensive emissions reporting system that would require approximately 13,000 facilities (which represents about 85% to 90% of all domestic greenhouse gas emissions) to report their greenhouse gas emissions, which data would surely help inform the implementation of any subsequent federal legislative or agency climate change regulation. The public comment period for the proposed rulemaking has

⁴ Pursuant to a 2007 U.S. Supreme Court ruling, the finding would also compel the EPA to regulate greenhouse gases under Section 202 of the Clean Air Act, which addresses new motor vehicles and motor vehicle engines.

closed, and the EPA is currently developing the final rule. The Act would create a similar, but not identical, greenhouse gas emission reporting registry.⁵

C. International Context

Pursuant to the Kyoto Protocol, thirty-seven industrialized countries and the European Community have committed to reduce their greenhouse gas emissions and have implemented various national and regional programs to fulfill those commitments (such as the European Union Greenhouse Gas Emissions Trading System that commenced operation in 2005). By their terms, these commitments expire in 2012. In anticipation of that date and with the goal of persuading high-emitting nations that have yet to impose restrictions (notably, the United States, China and India) to agree to greenhouse gas emission reductions, the international community is negotiating a successor agreement that would set longer-term emission reduction commitments. The next opportunity to reach such an agreement is the December 2009 United Nations Framework Convention on Climate Change Conference in Copenhagen, Denmark. Ahead of this conference, on July 8, 2009, the leaders of the Group of Eight nations, including President Obama, reiterated their support for global greenhouse gas emission reductions and the need to reach an international agreement on these reductions in Copenhagen.⁶

The status and substance of any federal or EPA regulation, even if still subject to negotiation or legal challenge, will certainly influence what progress is made in Copenhagen. Certain nations have already expressed a concern that the Act's greenhouse gas emission reduction goals are too weak. If draft or final federal legislative or agency regulation is further weakened before December 2009, it may be even more difficult for the international community to reach a consensus on reduction commitments.

Section II. Key Features

A. Cap-and-Trade System

The Act would amend the Clean Air Act by adding a broad framework for a cap-and-trade system for anthropogenic greenhouse gas emissions (*i.e.*, greenhouse gas emissions that result from human activities).⁷ In general terms, a cap-and-trade system sets a limit on the amount of greenhouse gases that may be emitted by certain covered sources. These covered sources must surrender emission "allowances" or "offset credits" equivalent to their total greenhouse gas emissions. If a covered source's greenhouse gas emissions will exceed the emission allowances or offset credits held by the covered source, then such covered source would need to (i) purchase additional emission allowances or offset credits in an auction or on the free market, and/or (ii) reduce its greenhouse gas emissions.

⁵ For instance, unlike the EPA proposed rule, the Act is limited to industrial and energy-producing operations and would not include the agriculture, livestock or forestry sectors. If both reporting systems become operative, unless reconciled, certain entities could be subject to two competing sets of requirements.

⁶ The Group of Eight statement set a goal of achieving a 50% reduction of global greenhouse gas emissions by 2050, with developed nations reducing their greenhouse gas emissions by 80% by 2050. The baseline year below which these reductions will be measured was not agreed upon. The Group of Eight leaders also noted that major emerging economies (*i.e.*, China, India, Brazil, etc.) will need to take "quantifiable actions to collectively reduce emissions significantly below business-as-usual."

In parallel talks among the seventeen major economies, developing countries (including China, India and Brazil) refused to limit their own emissions citing, in part, a failure by the Group of Eight to commit to any 2020 reduction goals.

⁷ The covered greenhouse gas emissions are: carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, any hydrofluorocarbons from a chemical manufacturing process at an industrial stationary source, any perfluorocarbon, nitrogen trifluoride and any other anthropogenic gas designated a greenhouse gas by the EPA. Hydrofluorocarbons sold for industrial or commercial purposes after their initial importation or production are covered under a separate cap-and-trade system discussed herein.

The Act would grant the EPA and, to a lesser extent, certain other agencies and regulatory bodies (some of which would be newly established by the Act) broad authority to implement, oversee and modify its cap-and-trade system. As a result, much of the detail of how the program would work is not addressed in the Act and is left to the EPA to develop via regulation.

- **Reduction Goals.** The cap-and-trade system establishes a cap on greenhouse gas emissions from certain sources (the “**capped sources**”) that declines over time. It also sets economy-wide reduction goals that generally mirror those for the capped sources.

Phase-in Date	Capped Sources Reduction Goal	Economy-wide Reduction Goal
2012	3%	3%
2020	17%	20%
2030	42%	42%
2050	83%	83%

These reduction goals appear intended to keep atmospheric greenhouse gas concentrations below 450 parts per million and to prevent a global average surface temperature increase of more than 3.6 degrees Fahrenheit above the pre-industrial average.⁸ These reduction goals, however, have been criticized, both by some domestic organizations and international leaders, as insufficient to avert catastrophic climatic effects.

- **Capped Sources.** The cap would be phased in over the first four years of the program. The capped sources⁹ and the initial compliance year for each such source are set forth below:

Phase-in Date	General Categories of Capped Sources
2012	<ul style="list-style-type: none"> ▪ Electricity generators; ▪ Producers and importers of certain fuels and fluorinated gases (which fuels and gases would emit more than 25,000 tons of carbon dioxide equivalents if combusted); and ▪ Geologic sequestration sites.
2014	<ul style="list-style-type: none"> ▪ Stationary sources with emissions of 25,000 tons of carbon dioxide equivalents of nitrogen trifluoride; ▪ Stationary sources in certain listed industries, including cement production, petroleum refining and aluminum production; ▪ Certain chemical and petrochemical stationary sources; and ▪ Stationary sources with emissions of 25,000 tons of carbon dioxide equivalents or more in certain industries, including ethanol production, glass production, food processing and pulp and paper manufacturing, or that have boilers that meet the

⁸ According to a climate change report authored by several federal agencies and released in June 2009, scientists generally believe that if these thresholds are exceeded, there is the potential for dangerous climate change impacts. As of 2008, the temperature has risen 1.5 degrees Fahrenheit above the pre-industrial average, and the atmospheric greenhouse gas concentration was 385 parts per million. U.S. GLOBAL CLIMATE CHANGE RESEARCH PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 24 (Thomas R. Karl et al. eds., Cambridge University Press, 2009).

⁹ One of the late additions to the Act in the House negotiations was an explicit exclusion of the agricultural and forestry sectors from the term “capped sector” in the Act. The apparent intent was to exempt these sectors from the cap, but the exemption is not clear, due perhaps to a drafting error. This will likely be remedied in the Senate’s draft, and the expectation is that the agricultural and forestry sectors would not be subject to the cap.

Phase-in Date	General Categories of Capped Sources
	25,000 ton carbon dioxide equivalent threshold.
2016	<ul style="list-style-type: none"> ▪ Local distribution companies delivering natural gas of 460 million cubic feet or more to customers that are not capped sources. (Emissions are calculated based on the greenhouse gases that would be emitted from the combustion of the natural gas (and any other gas commingled with natural gas for delivery purposes) that is delivered to non-capped sources.)

- Emission Allowances. The Act sets forth the quantity of annual emission allowances that the EPA would make available in each year beginning in 2012. One emission allowance represents the right to emit one ton of carbon dioxide equivalent greenhouse gas. The quantity of annual emission allowances made available generally decreases each year, in conjunction with the increase in the reduction goal, until 2050, at which time it levels off and remains constant.¹⁰ Prior to 2030, the vast majority of emission allowances would be distributed at no cost to certain industries and sectors. An additional number of emission allowances would also be auctioned with the proceeds directed to achieve specific goals.¹¹ From 2030 to 2050, approximately half of all emission allowances would be distributed for free, with the remaining emission allowances auctioned. (See [Appendix A](#) for information on the distribution of emission allowances.) In addition to the emission allowances, compensatory allowances would also be provided for certain actions that result in avoided emissions, if allowances were previously retired for the emissions avoided.

The House Energy and Commerce Committee indicated that the three primary goals in allocating emission allowances were: (i) to protect consumers from energy price increases, (ii) to assist industry in the transition to a clean energy economy and (iii) to encourage energy efficiency and clean energy technology. The allocation of allowances, however, has sparked debate on both sides, with some claiming that, even with the substantial allocation provided in the Act, the costs required to comply with the cap would be too burdensome on industry¹² and would lead to significant price increases for consumers,¹³ and others claiming that the allocation is too generous and that it would not incentivize the intended reduction in carbon intensive activities and might even cause an increase in carbon-intensive operations.¹⁴

¹⁰ The cap would increase in 2014 and 2016 to account for the inclusion of additional capped sources in those years.

¹¹ The majority of the free emission allowances would be directly allocated to individual entities that are capped sources. An example of this distribution mechanism is the emission allowances allocated to energy-intensive, trade vulnerable industries which would go directly to entities in such industries. However, some of the emission allowances would be auctioned by the EPA for the benefit of certain groups, and the Act would direct the distribution of these proceeds. An example of this distribution mechanism is the emission allowances that would be allocated to low-income consumers. These would be auctioned by the EPA with the auction proceeds used to fund an energy refund for low-income consumers.

¹² The National Mining Association opposes the Act, projecting a 75% decline in coal use by 2030 and the elimination of 70,000 coal mining jobs.

¹³ The Congressional Budget Office (“CBO”) estimated the cost of the cap-and-trade system would be approximately \$175 per household by 2020 (based on the draft of the Act that was reported by the House Energy and Commerce Committee on May 21, 2009). Others contend that the CBO failed to take numerous relevant costs into account in its analysis. The Heritage Foundation, for example, estimates the cost of the Act to exceed \$4,600 per household by 2035 if indirect costs are included. Supporters of the Act, on the other hand, counter that the CBO’s figures do not reflect the benefits of greenhouse gas emission reductions, such as averting the costs of climate driven floods, droughts and disease.

¹⁴ Greenpeace, in its June 25, 2009 statement in opposition to the Act, claimed that the “giveaways and preferences in the [Act] will actually spur a new generation of nuclear and coal-fired power plants to the detriment of real energy solutions.” Friends of the Earth decried on June 26, 2009 that the Act “will lock us into a system that rewards polluters with massive giveaways and can be gamed by Wall Street.” Other environmental organizations, such as the Sierra Club and Natural Resources Defense Council, however, continue to support the Act while also calling for the Senate to strengthen certain provisions and preserve the EPA’s authority to regulate greenhouse gas emissions under the Clean Air Act.

- Auctions. Other than by direct allocation, the primary method of distributing emission allowances would be via quarterly auction run by the EPA. The Act provides that the first auction would occur by March 31, 2011. Beginning in 2012, emission allowances dated the year of the auction and subsequent years must be made available at each auction. The auctions would be single-round, sealed-bid uniform price format. Bidder identity must be disclosed for all bids and the identities of all winning bidders would be made public. No single bidder could purchase more than 5% of the emission allowances available at any auction. The minimum price for an emission allowance in 2012 would be \$10 (in 2009 dollars) and would be increased by 5% plus the rate of inflation in each subsequent year. The EPA could also auction emission allowances on consignment for third-party holders of those emission allowances. Some relief on the potential upward movement of emission allowance prices would be provided by quarterly strategic reserve auctions, where a small percentage of the annual emission allowances would be available only to capped source bidders at a set price.¹⁵ The strategic reserve would be allocated 1% to 3% of emission allowances from each vintage year initially and would be replenished by purchasing and retiring international offset credits from reduced deforestation activities.
- Offset Credits. The Act includes a mechanism to allow capped sources to purchase offset credits generated by activities unrelated to such source's operations, where such activities sequester or reduce emissions of greenhouse gases or result in the destruction of chlorofluorocarbons (CFCs) or other ozone-depleting substances. This mechanism would provide capped sources with a relatively inexpensive way to comply with the cap while also encouraging greenhouse gas emission reductions in areas of the economy outside of the cap. It is important to note that this provision would allow capped sources to emit a greater quantity of greenhouse gases than permitted by the cap. The EPA would issue most offset credits, after determining the validity of an offset project, under the guidance of an independent advisory board. The U.S. Department of Agriculture would issue offset credits (and determine the validity of the offset project) for domestic agricultural and forestry projects that sequester or reduce emissions of greenhouse gases. Giving the Department of Agriculture oversight over the agriculture and forestry offset credit program was a last minute change to the Act which was widely reported as necessary to obtain the support of certain "farm state" representatives in the House and will likely be necessary to satisfy Senators from those states as well.

Capped sources would be able to use offset credits to demonstrate compliance by allowing each source to meet a statutorily prescribed percentage of its emissions with offset credits. Each capped source's "offset" percentage starts at approximately 30% of its emissions in 2012 and increases to almost 66% in 2050. Each source may obtain half of its offset credits from domestic projects and half from international projects in a developing country that is party to an agreement with the United States regarding offset requirements. Until 2018, an international offset credit would be valued the same as an emission allowance or a domestic offset credit. However, beginning in 2018, 1.25 international offset credits must be obtained for any emission allowance being "offset." There has been some concern that there would not be sufficient, economically-viable domestic offset projects available to satisfy the domestic portion of the offset percentage, and, accordingly, the real limitation on offset credits is much lower. To address this concern, the Act would allow the EPA to adjust the split between international and domestic offset credits to be 75%/25% rather than 50%/50%. Concerns have also been raised about the effectiveness of allowing international offset credits to be used to satisfy the cap, as it would be difficult to ensure that these offset credits relate to real, additional reductions in greenhouse gas emissions.

The value of offset credits for greenhouse gas sequestration activities are seen as less clear, due to a concern that the stored or "sequestered" gases could be released to the atmosphere at a later date. As a result, the Department of Agriculture and the EPA would attempt to incentivize permanent sequestration (a) by accounting

¹⁵ The initial minimum price for an emission allowance in the strategic reserve auction would be \$28 in 2012 and would be adjusted annually.

for (*i.e.*, deducting) expected future releases when they issue offset credits for most sequestration projects¹⁶ and (b) with respect to short-term agricultural or forestry sequestration projects, by having the Department of Agriculture issue “term offset credits” that expire and, upon such expiration, that must be replaced with emission allowances or other offset credits.

- **Trading.** Emission allowances and offset credits¹⁷ can be freely traded. As there are no restrictions on who may trade, entities that are not capped sources may also buy and sell emission allowances and offset credits.
- **Banking and Borrowing.** An unlimited number of emission allowances and offset credits, once issued, could be held (*i.e.*, banked) forever without penalty. A capped source could also freely borrow emission allowances from the immediately subsequent year and up to 15% of emission allowances, with prepaid interest, from the next one to five years.

For illustrative purposes, to comply with the cap on its 2012 greenhouse gas emissions, a capped source could hold a combination of the following emission allowances and offset credits at April 1, 2013:

- 2012 emission allowances (either directly allocated or purchased at auction or on the market)
- an unlimited number of 2013 emission allowances (no interest)
- up to 15% of its emissions with 2014 to 2018 emission allowances (at 8% annual interest, prepaid)
- up to 15% of its emissions with domestic offset credits (and/or term offset credits)
- up to 15% of its emissions with international offset credits (and/or term offset credits)
- an unlimited number of approved international emission allowances
- an unlimited number of compensatory allowances

- **Penalty.** If a capped source does not have emission allowances or offset credits for its annual greenhouse gas emissions by April 1 of the following year, that source, along with the owner and operator of that source, would be subject to a penalty equal to (i) twice the auction clearing price for the earliest vintage year of emission allowances in the last auction carried out prior to the missed compliance deadline multiplied by (ii) the number of tons of carbon dioxide equivalent greenhouse gas emissions for which that source did not hold emission allowances or offset credits. The capped source and its owner and operator could also be required to provide emission allowances in the following year(s) equivalent to the quantity of emission allowances that were not provided in the year of non-compliance. These penalties would be in addition to any other fines, penalties or assessments available against the owner, operator or capped source under the Act or any other law.
- **Greenhouse Gas Registry.** The Act requires the EPA to establish, within six months of enactment, a federal greenhouse gas registry to collect greenhouse gas emissions and other data. The registry would collect data from (i) capped sources, (ii) any entity that would be a capped source if the threshold were set at 10,000 tons of carbon dioxide equivalent emissions per year instead of 25,000 tons, (iii) any local distribution company that would be a capped source if the threshold were set at 184 million cubic feet of natural gas deliveries per year instead of 460 million and (iv) entities that deliver electricity to facilities in energy-intensive industrial sectors that

¹⁶ Generally, this is achieved by deducting from the offset credits issued for a particular project a quantity of offset credits and placing those credits in a reserve account to address the risk of future releases.

¹⁷ The provision of the Act (§724(b)) that allows for free trading of offset credits and emission allowances does not include term offset credits. As a result, it appears the Act does not allow term offset credits to be freely traded, though this could be a drafting error as other trading-related provisions of the Act were modified to include term offset credits.

satisfy certain energy or greenhouse gas intensity thresholds (these sectors and thresholds are not clearly defined by the Act and would need to be developed via regulation). The registry would also collect data on (x) the production, manufacture and importation of fuels and industrial gases, (y) deliveries of natural gas and (z) the capture and sequestration of greenhouse gases. Operations subject to this requirement would be required to report greenhouse gas emissions data for the years 2007 to 2010¹⁸ in early 2011 and to report quarterly thereafter. All data collected would be made publicly available.

▪ Interaction with Other Programs.

- Title V. For stationary sources already subject to the Clean Air Act's Title V requirements, any new requirements imposed on such source by the cap-and-trade system would be implemented via such source's Title V permit. For capped sources not subject to Title V, the EPA would determine how the program would be implemented.
- Preemption of other cap-and-trade systems. The federal program would preempt state (and other political subdivision) cap-and-trade systems from 2012 through 2017, but the Act would allow other forms of regional, state and local regulation of greenhouse gas emissions, including of auto emissions. It therefore appears that the Act would allow most of the climate-related "command and control" initiatives California is implementing under its AB32 program to proceed, while the current cap-and-trade system for power plants established by the states party to the Regional Greenhouse Gas Initiative would be preempted from 2012 through 2017. The Act does not mention pre-2012 and post-2017 state or regional cap-and-trade systems, so it seems that such systems could co-exist with the federal program except during such six-year period.

In addition, the Act would appear to allow state and local governments to require the submission of federal emission allowances or offset credits to demonstrate compliance with state or local government programs, at any time, in amounts beyond what would be required by the Act. This diversion of federal emission allowances and offset credits would effectively permit a state or local government to lower the cap within its jurisdiction, which would in turn cause a system-wide increase in the price of emission allowances and offset credits as a disproportionate number of allowances and credits would be diverted to such state or locality.

To account for the fact that some emitters would have already purchased emission allowances under state and regional systems that would be preempted, emission allowances issued prior to 2012 (and not yet used or retired) by the Regional Greenhouse Gas Initiative, California and the Western Climate Initiative¹⁹ could be exchanged for federal emission allowances.

- International emission allowances and offset credits. Emission allowances issued by a foreign national or supranational government in connection with a mandatory cap set by that government would be treated as fungible with an emission allowance issued under the Act for purposes of demonstrating compliance with the Act's cap. The EPA may also issue offset credits in exchange for the retirement of international offset credits issued by certain international bodies. This mechanism would allow some exchangeability, subject to EPA approval, with emission allowances and offset credits from the United Nations and European Union systems.

¹⁸ The EPA may waive all or a portion of this initial reporting requirement if it determines that an entity did not keep the data and records necessary to report.

¹⁹ California and the Western Climate Initiative do not yet have functioning cap-and-trade systems, but such systems are under development and intended to be in place by 2012.

- Exemptions from existing Clean Air Act programs. The Act exempts greenhouse gases from being added as air pollutants or regulated under certain existing Clean Air Act programs²⁰ simply because of their impact on global climate change. This appears to be a response to concerns that regulating greenhouse gases would overwhelm existing Clean Air Act programs and to clarify that the Act, not the existing provisions of the Clean Air Act, is the primary regulatory framework for greenhouse gas emissions.
- Hydrofluorocarbon (HFC) regulation. The Act would also establish a separate cap-and-trade system for hydrofluorocarbons, which are extremely potent greenhouse gases. This system would be similar to the system for hydrochlorofluorocarbons (HCFCs) and ozone-depleting substances currently in place under the Clean Air Act. The goal is to reduce, by 2030, HFC production and consumption to 15% of 2004-2006 consumption.
- Smaller Sources Outside of the Cap. The EPA would need to provide an inventory of, and promulgate greenhouse gas performance standards under Section 111 of the Clean Air Act for, existing uncapped stationary sources that fall into one of the following categories:
 - stationary sources with more than 10,000 tons of carbon dioxide equivalent emissions per year individually and that together account for 20% or more of uncapped emissions;
 - each category of stationary sources that emitted 10% or more of uncapped methane emissions, as of 2005, in the aggregate;²¹ and
 - all categories of industrial stationary sources that emit greenhouse gas emissions which, when combined with the greenhouse gas emissions of capped industrial sources, together constitute 95% or more of total greenhouse gas emissions from the industrial sector.

The EPA could require a cost-effective design, equipment, work practice or operational standard (or some combination thereof) in lieu of a performance standard for these stationary sources. If the EPA wants to subject a capped source to any greenhouse gas related performance standards, it would need to have a non-climate change reason to do so.

B. Combined Efficiency and Renewable Electricity Standard

The Act would require that certain electric utilities satisfy a Combined Efficiency and Renewable Electricity Standard by meeting an increasing portion of their power demand through renewable energy generation and/or energy efficiency measures. The Act would permit, but not necessarily require, individual utilities to generate renewable electricity or achieve electricity savings themselves; utilities could purchase from other utilities their rights to claim electricity savings or renewable electricity generation.

Some environmental groups and clean technology companies have complained that this federal standard is insufficient to spur large-scale investment in renewable energy and might even undercut the development of more stringent standards at the state level.

²⁰ Specifically, greenhouse gases are exempted from listing as air pollutants under 42 U.S.C. §7408(a) and from the provisions of 42 U.S.C. §7415 (international air pollutants), 42 U.S.C. §7412 (hazardous air pollutants) and 42 U.S.C. §§7470-7479, 7491-7492 (prevention of significant deterioration/new source review).

²¹ Notably, livestock production activities, which are a significant source of the potent greenhouse gas methane, are explicitly excluded from the categories that will be subject to these performance standards.

This combined standard – and the ability to trade for compliance purposes – is modeled in part on the existing “renewable portfolio standards” already instituted by over thirty states. Such state standards typically mandate that a percentage of a utility’s power be generated from renewable, low-emission energy sources, thereby causing a reduction in greenhouse gas emission intensity from the power sector. In recognition of the fact that renewable energy sources are not distributed evenly among the states, the state standards often permit utilities to unbundle from the underlying electricity the renewable aspect of that electricity, which can then be sold separately in an interstate market.²²

The Act’s combined standard is a modified renewable portfolio standard, in which a portion of the requirement may be met through energy efficiency measures, and in which the right to claim both energy savings and renewable generation can be unbundled from the underlying savings or generation and traded separately. This modification of incorporating electricity savings into the standard reflects the important role energy efficiency will likely play in achieving greenhouse gas reductions, especially in the near term.

- Terms of Standard. Beginning in 2012, the Act would mandate that utilities with annual sales to consumers in excess of 4 million megawatt hours of electricity submit to the Federal Energy Regulatory Commission (“FERC”) some combination of the following in an aggregate amount equal to a required percentage of their electricity demand: (i) renewable electricity credits (“RECs”) evidencing electricity generation from renewable sources and (ii) proof of demonstrated electricity savings relative to business-as-usual projections.

This required percentage increases over time according to the following table.²³

Calendar Year	Required Percentage
2012–2013	6.0%
2014–2015	9.5%
2016–2017	13.0%
2018–2019	16.5%
2020–2039	20.0%

These utilities would need to meet at least three-quarters of the required percentage using RECs, with the remainder achieved through electricity savings, unless the relevant state requests that a greater portion (up to two-fifths) be met through electricity savings.

As an alternative means of compliance, a covered utility could meet its required percentage by paying \$25 in lieu of each required REC or megawatt of electricity savings. Such funds would be paid to the relevant state(s) in which the utility’s electricity is sold for use by such state(s) to deploy renewable energy technology, implement energy savings programs and report to FERC on such activities.

- Renewable Electricity Credits. FERC would be directed to issue to each generator of renewable energy one REC for each megawatt hour of renewable electricity generated after December 31, 2011.²⁴

²² To illustrate, a New England utility that generates power from fossil fuel might nonetheless be able to satisfy a renewable portfolio standard by buying from a solar power company located in the desert Southwest the right to claim renewable energy generation.

²³ For purposes of calculating the required amount of electricity savings and renewable generation, electricity generated from certain hydropower facilities, nuclear facilities placed in service after enactment or fossil fuel units for which greenhouse gases are captured and sequestered is disregarded.

- Definition of renewable electricity. Renewable electricity means electricity generated from the following sources: wind; solar; geothermal; renewable biomass; biogas and biofuels derived exclusively from renewable biomass; certain hydropower; certain marine and hydrokinetic renewable sources that do not use a dam, diversionary structure or impoundment; landfill gas; wastewater treatment gas; coal mine methane used to generate electricity at or near the mine mouth; and certain waste-to-energy facilities. Nuclear power has been omitted from this definition, but nuclear plants placed into service after enactment of the legislation would be excluded from the required percentage calculation.
- Trading and banking. RECs could be sold, traded, submitted for compliance or retired. This is consistent with the state systems on which the standard is generally modeled and enables companies in regions where renewable energy sources are scarce to purchase RECs from those regions where such sources are more abundant.²⁵ RECs could also be banked for up to three years, after which time they expire.
- Electricity Savings. In addition to RECs, demonstrated electricity savings could be used to help meet the required percentage. Such savings are reductions in electricity consumption relative to business-as-usual projections achieved through implementation (after enactment of the legislation) of the following electricity saving measures: reductions in end-use electricity consumption, reductions in distribution system losses and savings derived from a combined heat and power system or fuel cell.
 - Measurement, verification and reporting. FERC would be instructed to promulgate regulations with respect to the measurement, third party verification and compliance reporting of such savings.
 - Trading. Covered utilities could obtain through bilateral contracts energy savings achieved by another party.
- Interaction with State Programs. In promulgating regulations, FERC would be specifically instructed to “preserve the integrity, and incorporate best practices, of existing State and tribal renewable electricity and energy efficiency programs,” and facilitate cooperation with other State, tribal and federal programs.²⁶
- Federal Renewable Energy Purchases. A certain percentage of the aggregate electricity consumed by federal agencies in a given year would need to be derived from renewable sources. The required percentage would increase over time in lock-step with the Combined Efficiency and Renewable Electricity Standard (see above table), provided that such percentage could be modified if the President determines that it is not feasible.
- Enforcement. Failure to comply would result in a civil penalty equal to twice the alternative compliance payment (i.e., \$50) multiplied by the aggregate quantity of RECs, electricity savings or equivalent compliance payments that such entity failed to submit.

(continued)

²⁴ To make “distributed renewable generation” (defined as renewable energy from a source with a capacity of no greater than two megawatts and primarily serving consumers at or near the generating facility) competitive with other renewable sources, FERC would be instructed to issue three RECs for each megawatt hour of renewable electricity generated by a distributed renewable generation facility. This multiplier would be reviewed periodically to ensure that it is no higher than necessary to make distributed renewable generation facilities competitive.

²⁵ For example, wind power is readily available in the northern Rocky Mountain region, and solar power is most abundant in the desert Southwest.

²⁶ For those states that, as of January 1, 2009, have a centralized procurement program to collect funds from retail electric suppliers and purchase renewable energy credits or certificates, the federal program requirements would be modified to impose obligations where appropriate on the relevant state rather than on the individual electric suppliers.

C. Emission Performance Standards for Coal-Fueled Power Plants and Carbon Capture and Sequestration Technology

The Act would impose greenhouse gas emission performance standards on certain coal-fueled power plants permitted after 2008 and would also create a framework to encourage the development of “clean coal” technology.

Coal-fueled power plants are a significant source of U.S. greenhouse gas emissions. However, because coal is an abundant and relatively inexpensive resource, many expect coal will remain an important source of power in the coming decades. To reconcile the continued use of coal with a carbon-restricted economy, significant effort has been expended to develop “clean coal” – a way of burning coal while minimizing the associated greenhouse gas emissions. The apparent leading clean coal technology is carbon capture and sequestration (“CCS”), by which carbon dioxide is separated from a facility’s emission stream and injected deep underground to be permanently stored in a geologic formation. CCS technology, however, remains in early development. In addition to technological hurdles associated with isolating and sequestering carbon dioxide, there are concerns over the long-term effectiveness of greenhouse gas storage, property rights issues associated with the use of underground geologic formations for such storage and concerns over the environmental and health consequences of sequestering greenhouse gases underground.

- Performance Standards for Coal-Fueled Power Plants. Under the Act, electric utility units required to have a Title V permit under the Clean Air Act and authorized to derive at least 30% of their annual heat input from coal, petroleum coke or a combination thereof would be subject to the following new performance standards under the Clean Air Act:
 - If initially permitted on or after January 1, 2020, 65% reduction in carbon dioxide emissions compared to uncontrolled emission levels.
 - If initially permitted on or after January 1, 2009 and before 2020, 50% reduction in carbon dioxide emissions by the earlier of: (i) 2025 or (ii) four years after the EPA concludes that CCS technology is in sufficient commercial operation.
- Commercial Deployment of Carbon Capture and Sequestration Technologies.
 - Demonstration and early deployment program. The Act would authorize the utility industry to create (subject to approval by an industry referendum) a Carbon Storage Research Corporation (“**Corporation**”)²⁷ which may collect an assessment from subject utilities based on the relative carbon dioxide emissions from the fossil-fuel based electricity they supply. Such assessments would then be used to accelerate the commercial availability of CCS technology through competitively awarded grants, contracts and financial assistance.

Initially the assessment collected should adhere to the following rates but would be recalibrated periodically to generate approximately \$1 billion annually.

²⁷ To create the Corporation, a qualified industry organization must undertake a referendum of all U.S. utilities delivering fossil-fuel based electricity to consumers, and votes representing at least two-thirds of the total quantity of fossil-fuel based electricity delivered to retail customers must approve of the formation of the Corporation. The Corporation would then be established unless opposed by certain state regulatory authorities. The Corporation would not be considered a governmental agency, but rather be established as a division or affiliate of Electric Power Research Institute.

Fuel Type	Rate per Kilowatt Hour
Coal	\$0.00043
Natural gas	\$0.00022
Oil	\$0.00032

The Corporation would be directed to seek to support at least five commercial-scale demonstration projects integrating CCS technologies.

While the Corporation would establish intellectual property policies to encourage individual ingenuity and invention, the Corporation would make publicly available, at no cost, information learned from the projects it supports. The Corporation would also be subject to other transparency requirements and lobbying restrictions.

- Commercial deployment program. The Act would direct the EPA to promulgate regulations for the distribution of greenhouse gas emission allowances that are issued under the cap-and-trade system discussed above to support the commercial-scale deployment of CCS technology in the power and industrial sectors.
 - Eligibility. For the owner or operator of a project to receive emission allowances, the project must be in the United States and must implement CCS technology at specified electric generating units²⁸ or industrial sources²⁹ that will achieve an at least 50% reduction in the facility's annual carbon dioxide emissions.
 - Distribution of allowances. Industrial sources could only receive up to 15% of the emission allowances allocated for CCS deployment under the cap-and-trade system. The remaining 85% would be issued to electric generating units pursuant to two successive distribution formulas that are phased in over time.³⁰ Certain coal-fueled generating units are subject to additional limitations that would reduce the amount of emission allowances they would otherwise receive.
 - Limitations. The EPA would not issue emission allowances until the relevant carbon dioxide emissions have been captured and sequestered. Projects may only receive annual emission allowances for the first ten years of their operation. No more than 72 gigawatts of total cumulative generating capacity could receive emission allowances under the program.
- Reports and studies. The Act also would direct the EPA to: (i) report to Congress on the key legal, regulatory and other barriers to the commercial-scale deployment of CCS; (ii) develop regulations pursuant to the Safe Drinking Water Act that impose financial responsibility requirements for carbon dioxide geologic sequestration wells; and (iii) establish a task force to study and report to Congress on the legal framework

²⁸ These must have nameplate capacity of 200 megawatts or more and derive at least 50% of their annual fuel input from coal and/or petroleum coke.

²⁹ Absent the CCS technology, these must emit more than 50,000 tons per year of carbon dioxide.

³⁰ For the first six gigawatts of electric generating units, emission allowances would be allocated in proportion to the percentage of facility emissions sequestered. The number of allowances granted would be increased for projects that are implemented before 2017 and decreased where the sequestration is used to enhance hydrocarbon recovery. After the initial six gigawatts threshold is met, allowances would be distributed to electric generating units through reverse auctions, in which the EPA would solicit from eligible projects bids that indicate the desired price per ton and the estimated quantity of carbon dioxide each project will permanently sequester over ten years. The EPA then would select the winning projects and distribute emission allowances pursuant to the price bid.

applicable to geologic sequestration. These tasks appear intended to help identify the gaps in the existing legal framework for regulating CCS and what additional rules might be warranted to protect against associated health and environmental risks and to foster development of CCS technology.

D. International Reserve Allowance Program – the Import Tariff Provision

If an international agreement requiring greenhouse gas emission reductions that satisfies certain requirements is not in place by January 1, 2018, then, under the Act, the President would be obligated to instruct the EPA and the U.S. Customs and Border Protection agency to establish an international reserve allowance (*i.e.*, tariff) program that would begin in 2020 (unless the President finds that such a program would not be in the national economic or environmental interest and both houses of Congress agree). In general, the international reserve allowance program would require importers of certain goods, in those industries that the EPA determines to be energy-intensive and trade-vulnerable, to purchase international reserve allowances at the then current auction price for emission allowances, adjusted for the value of any emission allowances allocated for free to comparable U.S. producers.³¹

This provision, which is meant to address carbon leakage and competitiveness concerns and was added to the Act right before the House vote, has sparked intense domestic and international response. President Obama, along with various foreign countries, including China, has expressed dissatisfaction with the notion of a tariff. The provision was also the subject of a recent hearing in the Senate where trade experts testified that the provision may violate international trade law and agreements and would likely spark retaliatory measures by other governments.

Section III. The Road Ahead

While the Act has not yet reached even the half-way point in the legislative process and significant changes are expected before any proposed legislation may become law, the provisions of the Act discussed above comprise the leading model for federal climate change legislation and are the basis for the current legislative debate in the Senate.

As noted earlier, it remains unclear whether any federal climate change law will be passed this year. There are significant political hurdles, and the Senate has a number of other high priority items on its current agenda, including in particular health care reform, which is the top priority for the Administration. Nonetheless, Senate Majority Leader Harry Reid (D-NV) has stated that he hopes to bring a climate bill to the Senate floor by the end of the year.

To meet that goal, significant work is required of at least six Senate committees. On June 17, 2009, the Senate Energy and Natural Resources Committee voted to report an energy bill, known as the American Clean Energy Leadership Act, that reflects some but not all aspects of the Act. For example, the bill has a national renewable energy standard but does not include the key cap-and-trade mechanism. The Senate Environment and Public Works Committee is taking the lead on drafting cap-and-trade text and is holding legislative hearings on the subject this month. In addition to these two committees, four other Senate committees are also likely to weigh in on various aspects of the developing Senate climate bill, including: Agriculture, Commerce, Finance and Foreign Relations. Senator Reid has set September 28, 2009 as the deadline for the committees to draft their respective components of the bill.

³¹ There are exceptions to the program, including those for certain importers from countries that are subject to greenhouse gas emission reduction programs at least as stringent as the one in the United States and for importers from those countries that the United Nations identified as amongst the least developed of the developing countries.

As the Senate takes up this topic, debates previously heard in the House are likely to continue over such matters as the specific levels of any greenhouse gas emission caps and renewable energy mandates, the cost and allocation of allowances, the offset policy, the costs to individuals, certain industries and the economy as a whole and whether the legislation could exacerbate the economic recession or jump-start job creation. For climate change legislation to succeed, it is not enough that the Senate passes its own bill; it must produce a bill that can be reconciled with the Act in such a way as to not disturb the very delicate balance struck in the House.

If the Senate passes a climate change bill, the next step would be to reconcile any differences between the Act and the Senate bill in a conference committee, after which both chambers must vote on the compromise bill. Only once both chambers approve identical bills can they send a bill to the President to sign into law.

The narrow margin by which the Act passed in the House foretells a very close vote in the Senate. In order to survive a very likely Republican-led filibuster, any Senate proposal would need sixty votes to pass. Although Democrats now control sixty seats in the Senate, the Senate vote is not expected to strictly follow party lines. (In the House, eight Republicans voted in favor of the Act, and forty-four Democrats opposed it.)

If Congress fails to pass climate change legislation, then the EPA and state and local governments can continue implementing their own greenhouse gas regulations. Currently, the EPA is forging ahead with its endangerment finding and greenhouse gas reporting rule and is positioning itself to promulgate regulations under the existing Clean Air Act. Also, in addition to the existing ten-state Regional Greenhouse Gas Initiative, two new regional cap-and-trade programs encompassing thirteen western and midwestern states are under development and expected to come into effect as early as 2012. As this patchwork of regulation grows more complicated, there may be renewed pressure on Congress to develop a consistent and comprehensive nationwide approach.



[Appendix A](#) contains further information on the distribution of emission allowances under the Act's proposed cap-and-trade system.

If you have any questions regarding the matters covered in this publication, please contact any of the lawyers listed below or your regular Davis Polk contact.

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- [American Clean Energy and Security Act of 2009 \(H.R. 2454\)](#)
- [Global Climate Change Impacts in the United States, U.S. Global Change Research Program](#)
- [Relevant Documents from U.S. House of Representatives, Committee on Energy and Commerce](#)
- See our [Environmental Practice Group](#) webpage for "[Derivatives Provisions in the American Clean Energy and Security Act of 2009](#)" and other environmental and energy related memoranda.

This is a summary that we believe may be of interest to you for general information. It is not a full analysis of the matters presented and should not be relied upon as legal advice.

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