

Background

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Global Climate-Change Bills Before Congress

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Members of Congress and their staffs are facing a growing body of legislation intended to address global climate change. Given the tremendous complexity of this issue, and given that few offices have any specialized expertise in it, understanding the implications of these climate-change bills may seem like an impossible task.

Nonetheless, Members of Congress may face votes on one or more such bills in the near future. This guide is intended to give non-experts an overview of how the major pieces of climate-change legislation would work.¹ Subsequent analyses will delve further into the economic impacts of these bills.

Economic Overview

The similarities and differences between these climate-change bills are summarized below and in Table 1. One thing that they all have in common is that they will not be cheap. Each tries to force down emissions associated with the fossil fuel use that is the backbone of the U.S. economy. Indeed, most proponents of global climate-change legislation intend to slow the rate of economic activity by reducing the use of the coal, oil, and natural gas upon which the United States relies for 85 percent of its energy.

All of the bills constrain the supply and/or raise the cost of energy in one way or another. This is especially true of coal, which provides half of America's electricity. Thus, all of the proposed approaches would add costs to the economy. The only variables would be the extent, distribution, and timing of these costs.

Talking Points

- Climate change is a complex issue in which only a few congressional offices have expertise, but Members of Congress may face votes on one or more climate-related bills in the near future. This guide provides an overview of these bills.
- Whatever the adverse consequences of global warming, even the most stringent of the pending bills would reduce only a fraction of those consequences at a large cost.
- Given the large cost, it is important that Congress avoid enacting legislation that does more harm than global warming itself.
- Climate legislation can take two forms: (1) expanding existing measures that mandate alternative energy sources or reduce energy consumption and (2) imposing cap-and-trade restrictions on emissions from fossil fuels. Both approaches seek to reduce carbon dioxide emissions from fossil fuels.

This paper, in its entirety, can be found at:
www.heritage.org/Research/EnergyandEnvironment/bg2075.cfm

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Table I

B 2075

Climate Change and Energy Bills Introduced in the 110th Congress (Bills 1–4)

Sponsor (Bill No.)	Lieberman–McCain (S. 280)	Bingaman–Specter (S. 1766)	Feinstein–Carper (S. 317)	Olver–Gilchrest (H.R. 620)
Title	Climate Stewardship and Innovation Act of 2007	Low Carbon Economy Act of 2007	Electric Utility Cap and Trade Act of 2007	Climate Stewardship Act of 2007
Status in Congress	July 24: hearings held by Senate Subcommittee on Private Sector and Consumer Solutions to Global Warming and Wildlife Protection	July 11: read twice and referred to the Senate Committee on Environment and Public Works	January 17: read twice and referred to the Senate Committee on Environment and Public Works	February 7: referred to the House Subcommittee on Fisheries, Wildlife, and Oceans
Emissions Reductions Targets	Mandatory caps (CO ₂): <ul style="list-style-type: none"> • 2019: 6,130 million tons (2004 levels) • 2029: 5,239 million tons (1990 levels) • 2049: 4,100 million tons (22% below 1990 levels) • 2050: 2,096 million tons (60% below 1990 levels) Long term: none	Mandatory caps (CO ₂): <ul style="list-style-type: none"> • 2012: 6,652 million tons • 2030: 4,819 million tons (1990 levels) 	Mandatory caps (CO ₂): <ul style="list-style-type: none"> • 2014: 2006 levels • 2015: 2001 levels • 2019: reduce by 1% per year • After 2019: reduce by 1.5% per year (or 25% below 1990 levels by 2050) Long term: none	Mandatory caps (GHG): <ul style="list-style-type: none"> • 2012: 6,150 million tons • 2020: 5,232 million tons (1990 levels) • 2030: 3,858 million tons (26% below 1990 levels) • By 2050: 1,504 million tons (70% below 1990 levels) Long term: none
Regulated Entities	Facilities (government and private) that emit 10,000 tons of CO ₂ per year	Cars, trucks, and airplanes are not covered. Owners would face higher fuel prices passed on by oil and gas companies.	All electricity generating entities of 25 megawatts or greater	All facilities (government and private) that emit 10,000 tons of CO ₂ per year; petroleum refineries, and importers
Renewable Portfolio Standard	Not specifically addressed	Not specifically addressed	Not specifically addressed	Not specifically addressed, but Climate Change Credit Corporation directed to provide incentives for production of wind, energy, and other renewable fuels
Motor Vehicle Efficiency	No CAFE or emissions standards specified	No CAFE or emissions standards specified, but 20% of funds to be used for an advanced technology research program	No CAFE or emissions standards specified	No CAFE or emissions standards specified
Biofuels/ Renewable Fuels	No comparable provision	7% of funds used toward cellulosic ethanol and solid-waste energy programs	No comparable provision	No comparable provision
Amends Clean Air Act	No amendments	No mandated standards specifically addressed	Adds new Title VII: Comprehensive Global Warming Pollution Reductions, among other changes	No amendments

Note: The six green house gases (GHG) are CO₂, CH₄, NO_x, HFCs, PFCs and sulfur HF.

Sources: The Heritage Foundation and Library of Congress, THOMAS, at <http://thomas.loc.gov> (October 3, 2007).

Table I (cont.)

B 2075

Climate Change and Energy Bills Introduced in the 110th Congress (Bills 5–7)

Sponsor (Bill No.)	Waxman–Allen (H.R. 1590)	Kerry–Snowe (S. 485)	Sanders–Boxer (S. 309)
Title	Safe Climate Act of 2007	Global Warming Pollution Reduction Act of 2007	Global Warming Pollution Reduction Act
Status in Congress	March 21: referred to House Subcommittee on Energy and Air Quality	February 1: read twice and referred to the Senate Committee on Finance	January 16: read twice and referred to the Committee on Environment and Public Works
Emissions Reductions Targets	Mandatory caps (GHG): <ul style="list-style-type: none"> • 2010: 2009 levels • 2019: reduce by 2% per year • 2020: 1990 levels • 2049: reduce by 5% per year • 2050: 80% below 1990 levels Long term: none	Mandatory Caps (GHG): <ul style="list-style-type: none"> • 2020: 1990 levels • 2030: 22% below 1990 levels • 2031–2050: reduce by 3.5% per year • 2050: 80% below 1990 levels Long term: 2°C or less above pre-industrial temperature level	Mandatory Caps (GHG): <ul style="list-style-type: none"> • 2008–2020: reduce by 2% per year to 1990 levels • 2030: 26% below 1990 levels • 2040: 57% below 1990 levels • 2050: 80% below 1990 levels Long term: stable at 450 ppm
Regulated Entities	Generally, sectors of the economy with the largest emissions and best opportunities to reduce emissions	Sources or sectors with greatest GHG emissions as determined by the EPA	To be determined by the EPA
Renewable Portfolio Standard	At least 20% of electricity sold in U.S. by 2020 (standards begin 2009, gradually increase thereafter). Energy Department may increase it beyond 20% after 2020. Does not pre-empt or limit state action.	Minimum percentages: <ul style="list-style-type: none"> • 2009–2010: 5% • 2011–2015: 10% • 2016–2020: 15% • After 2020: 20% Does not preclude states from imposing additional renewable requirements	Minimum percentages: <ul style="list-style-type: none"> • 2008–2009: 5% • 2010–2014: 10% • 2015–2019: 15% • After 2019: 20% Does not preclude states from imposing additional renewable requirements
Motor Vehicle Efficiency	EPA to issue standards limiting GHG emissions from motor vehicles at least as stringent as California standards	EPA to issue standards limiting GHG emissions from motor vehicles at least as stringent as California standards	EPA emissions targets for 2016: <ul style="list-style-type: none"> • Cars and light trucks: 44 mpg • Heavy cars, medium trucks: 27 mpg • Non-passenger vehicles: 22.4 mpg (if gasoline)
Biofuels/Renewable Fuels	No comparable provision	Increases the renewable fuels requirement to 30 billion gallons by 2020 and 60 billion by 2030. Energy Secretary to promulgate regulations requiring the installation of E85 fuel pumps.	Of the federally required renewable fuel total, 5 billion gallons by 2015 must have 75% fewer greenhouse gas emissions than gasoline on life cycle basis—essentially, not existing starch-based ethanol methods
Amends Clean Air Act	Adds new Title VII	Unknown	Adds new Title VII: Comprehensive Global Warming Pollution Reductions, among other changes

Environmental Overview

A detailed discussion of the science of climate change is beyond the scope of this guide. However, each of these bills is a solution only to the degree that climate change is a problem in the first place and that the bill addresses it effectively. Thus, a short scientific overview is necessary to gauge the worth of these bills and determine whether or not the costs that they impose are justified.

There has never been much doubt that the release of carbon dioxide and other so-called greenhouse gases into the atmosphere has at least some warming effect on the planet. The real issues are whether or not the release of greenhouse gases is a significant factor relative to natural temperature variability and what the likely consequences of warming would be.

For any legislation, there are two key questions:

- What would each climate-change bill accomplish toward reducing any adverse impacts of global warming?
- Would the benefits justify the costs?

Climate change is not unprecedented. The Earth's average temperature has increased over the past 30 years, and many point to this as evidence of dangerous human-induced warming. However, temperatures have risen and fallen many times before, including the Medieval Warm Period and a well-documented global cooling trend from the 1940s to the 1970s that prompted headlines and *Newsweek* cover stories warning of a coming ice age. While mankind's activities have likely contributed to the current warming trend, today's temperatures are still within the range of natural variability.

Nor is the degree of the current warming worthy of the description "catastrophic." The current upward trend in temperatures is not unprecedented and will not lead to unprecedented catastrophes unless a very unlikely pattern appears, and this view is supported by the scientific evidence. Indeed, virtually all of the alarming rhetoric surrounding glo-

bal warming—a massive rise in the sea level, deadlier hurricanes, the spread of tropical diseases, and other calamities—lies outside the scientific consensus. These climate bills would address real concerns, but these concerns are not catastrophic.

In addition, whatever the adverse consequences of warming, even the most stringent of the pending bills would reduce only a fraction of those consequences at a large cost. The most ambitious measure to date is the Kyoto Protocol, the multilateral treaty to reduce greenhouse gas emissions to which the U.S. is not a party. Even if the U.S. were a party to the treaty and the European nations and other signatories were in full compliance (most are unlikely to meet their targets), the treaty would reduce the Earth's future temperature only by an estimated 0.07 degrees Celsius by 2050—an amount too small even to verify.

Indeed, most of the climate-change bills have already been criticized by environmental activists as inadequate or, at best, as mere "first steps" toward more stringent controls.

Ironically, carbon dioxide emissions in several Kyoto nations have risen faster in recent years than U.S. emissions. This raises serious questions about the efficacy of bills that mimic the Kyoto approach.

Climate legislation runs the real risk of doing more economic harm than environmental good. Congress should carefully weigh the costs of these proposed measures against the likely benefits.

The Climate-Change Bills

The pending climate-change bills and those likely to be introduced can be divided into two broad categories: traditional energy measures and "cap-and-trade" legislation. Some hybrid bills contain elements of both.

Traditional Energy Measures. Most people are familiar with the first category because such measures are included in existing energy law. This includes mandates and incentives to switch to non-

1. The legislation overview in Table 1 is based on a detailed analysis of global climate-change legislation prepared by analysts at Global Insight, Inc. (GII) under a contract with The Heritage Foundation. GII chose the legislation reviewed in Table 1 and the review categories in consultation with Heritage Foundation analysts. However, the methodologies, assumptions, conclusions, and opinions presented here are entirely the work of analysts at The Heritage Foundation. They have not been endorsed by and do not necessarily reflect the views of GII.

fossil fuel alternatives—namely, Renewable Fuels Standards (RFS; e.g., corn-based ethanol for vehicles) and Renewable Portfolio Standards (RPS; e.g., wind power for electricity generation). This category also includes measures aimed at reducing energy consumption, such as energy efficiency standards for home appliances and motor vehicle efficiency standards for cars and trucks, sometimes referred to as corporate average fuel economy (CAFE) standards.

Most of these measures are currently in place at the federal and/or state levels and have been justified on a variety of non-climate change grounds, including energy security and air pollution control. For example, the vehicle standards were first adopted in the 1970s in response to the Arab oil embargo, but climate change is now serving as a rationale for further tightening and expanding these provisions.

The primary vehicle for these measures is the comprehensive energy bill currently before Congress, but some provisions are included in the cap-and-trade bills.

Cap-and-Trade. This approach involves the first-ever restrictions on fossil fuel use in the United States. The “cap” refers to a limit on the amount of carbon dioxide that may be emitted from the use of coal, oil, or natural gas. “Trade” refers to the mechanism by which those covered entities can buy or sell the rights to emit, called allowances. These allowances could be bought and sold like a com-

modity. Thus, if a regulated entity reduced its emissions more than required, it could sell its excess allowances to others at the market price, usually measured in dollars per ton of carbon dioxide.²

These bills have different emissions-reduction targets. Obviously, the more rapid and deep the reductions required, the more costly the bill would be. Each of the bills covers different entities. Some focus on specific sectors like electricity generation, while others would apply to the entire economy. Some bills cover only the largest emitters, while others would apply more broadly to even smaller entities.

Table 1 provides a description of the major bills currently before the 110th Congress.³

Conclusion

As Table 1 highlights, these legislative proposals to reduce greenhouse gas emissions would mandate significant federal interference in the energy choices made by businesses and consumers. The economic impacts would certainly be substantial, as will be detailed in subsequent Heritage Foundation analyses. Whether or not these costs are worthwhile will be the key question in the upcoming debate over climate-change legislation.

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2. For example, under the cap-and-trade bills, each utility would be granted a certain amount of annual emissions allowances based on past emissions or some other formula. If the utility could reduce its emissions below the allotted levels (e.g., by switching some of its power generation from coal to a lower-emitting fuel source), it could then sell its excess allowances to another utility that has not been able to reduce its emissions sufficiently.
3. As of this writing, some major cap-and-trade proposals, such as one from Senators Joseph Lieberman (I-CT) and John Warner (R-VA), have yet to be formally introduced.