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Market-Based Greenhouse Gas Emission Reduction Legislation: 108th through 116th Congresses

Updated September 29, 2020

Congressional Research Service
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R45472

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SUMMARY

R45472

September 29, 2020

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Market-Based Greenhouse Gas Emission Reduction Legislation: 108th through 116th Congresses

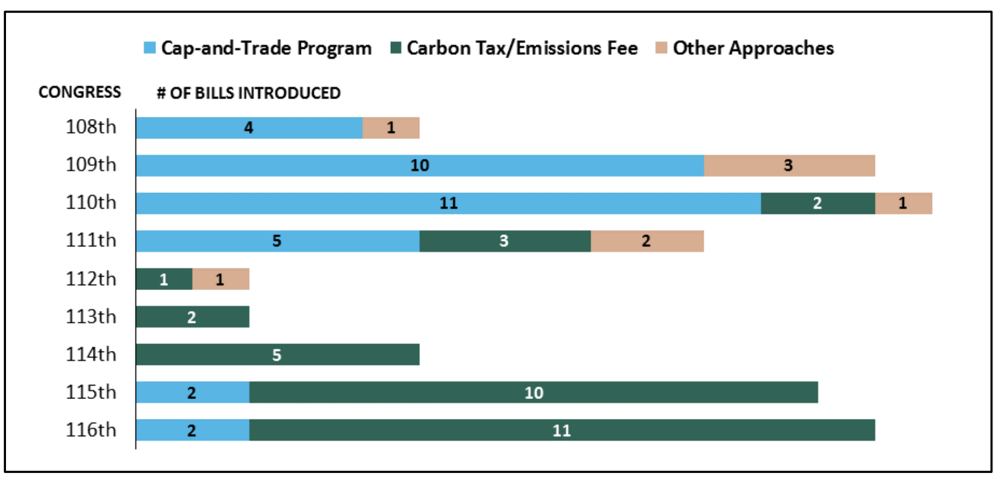
Congressional interest in market-based greenhouse gas (GHG) emission control legislation has fluctuated over the past 15 years. During that time, legislation has often involved market-based approaches, such as a cap-and-trade system or a carbon tax or emissions fee program. Both approaches would place a price—directly or indirectly—on GHG emissions or their inputs, namely fossil fuels. Both would increase the price of fossil fuels, and both would reduce GHG emissions to some degree. Both would allow emission sources to choose the best way to meet their emission requirements or reduce costs, potentially by using market forces to minimize national costs of emission reductions. Preference between the two approaches ultimately depends on which variable policymakers prefer to precisely control—emission levels or emission prices.

A primary policy concern with either approach is the economic impacts that may result. Expected energy price increases could have both economy-wide impacts (e.g., on the U.S. gross domestic product) and disproportionate effects on specific industries and particular demographic groups. The degree of these potential effects would depend on a number of factors, including the magnitude, design, and scope of the program and the use of tax or fee revenues or emission allowance values.

As the figure below illustrates, between the 108th and 111th Congresses, most of the introduced bills would have established cap-and-trade systems. Between the 112th and 115th Congresses, most of the introduced bills would have established carbon tax or emissions fee programs. Most of the proposals from the 116th Congress would establish a carbon tax or emissions fee program. The proposals range in the scope of emissions covered from CO_2 emissions from fossil fuel combustion to multiple GHG emissions from a broader array of sources. In addition, the proposals differ by how, to whom, and for what purpose the fee revenues or allowance value would be applied. Some economic analyses indicate that policy choices to distribute the tax, fee, or emission allowance revenue would yield greater economic impacts than the direct impacts of the carbon price.

Figure 1. Number and Type of Introduced GHG Emission Reduction Bills

108th Congress through 116th Congress



Source: Prepared by CRS.

Notes: "Other Approaches" include (1) proposals that did not specify the overall framework but would have authorized EPA to establish a GHG emission reduction program and (2) proposals that combine elements from a cap-and-trade system with price control features in a carbon tax or emissions fee system, sometimes described as hybrid approaches.

This report includes a separate table for each Congress, comparing GHG emission reduction legislation by the following characteristics:

- **General framework:** the proposed program structure and scope in terms of emissions covered, multiple GHG emissions, or just carbon dioxide (CO_2) emissions.
- **Covered entities/materials:** a list of the industries, sectors, or materials that would be subject to the program.
- **Emissions limit or target:** the GHG or CO_2 emissions target or cap for a specified year.
- **Distribution of allowance value or tax revenue:** how emission allowance value or carbon tax or fee revenue would be distributed.
- **Offset and international allowance treatment:** the degree to which offsets and international allowances could be used for compliance purposes and the types of offset activities that would qualify.
- **Mechanism to address carbon-intensive imports:** a U.S. GHG reduction program may create a competitive disadvantage for some domestic businesses, particularly carbon-intensive, trade-exposed industries.
- **Additional GHG reduction measures:** other mechanisms designed to further reduce GHG emissions that are not covered in the central program.

Contents

Introduction ... 1
Background... 3
What Is a GHG Emissions Cap-and-Trade System? ... 3
What Is a Carbon Tax or Emissions Fee? ... 4
GHG Emission Reduction Legislation by Congress ... 6

Figures

Figure 1.Number and Type of Introduced GHG Emission Reduction Bills ... 2
Figure 2. Number and Type of Market-Based GHG Emission Reduction Bills Introduced in 108th Congress through 116th Congress ... 3

Tables

Table 1. GHG Emission Reduction Proposals: 108th Congress ... 7
Table 2. GHG Emission Reduction Proposals: 109th Congress ... 10
Table 3. GHG Emission Reduction Proposals: 110th Congress ... 17
Table 4. GHG Emission Reduction Proposals: 111th Congress ... 27
Table 5. GHG Emission Reduction Proposals: 112th Congress ... 35
Table 6. GHG Emission Reduction Proposals: 113th Congress ... 37
Table 7. GHG Emission Reduction Proposals: 114th Congress ... 40
Table 8. GHG Emission Reduction Proposals: 115th Congress ... 46
Table 9. GHG Emission Reduction Proposals: 116th Congress ... 58

Contacts

Author Information ... 71

Introduction

Human activities, particularly fossil fuel combustion and industrial operations, have raised the atmospheric concentration of carbon dioxide (CO_2) and other greenhouse gases (GHGs)[1] by about 40% over the past 150 years. Almost all climate scientists agree that these GHG increases have contributed to a warmer climate today and that, if they continue, they will contribute to future climate change.[2] Although a range of actions that seek to reduce GHG emissions are currently underway or being developed on the international[3] and subnational level (e.g., individual state actions or regional partnerships),[4] federal policymakers and stakeholders have different viewpoints over what to do, if anything, about future climate change and related impacts.

Congressional interest in GHG emission control legislation has fluctuated over the last 15 years. Proposals to limit GHG emissions have often focused on market-based approaches, such as a GHG emission cap-and-trade program or a GHG emissions tax (often referred to as a carbon tax) or fee.[5] In general, a market-based approach would place a price on GHG emissions (e.g., through an emissions cap or emission tax or fee), allowing covered entities to determine their pathway of compliance.[6]

This report provides a comparison of the legislative proposals from the 108th through the 116th Congresses that were and are designed primarily to reduce GHG emissions using market-based approaches such as cap-and-trade or carbon tax/fee programs. During this time frame, Members introduced multiple energy-related proposals that would have likely resulted in reductions in

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[1] GHGs in the atmosphere trap radiation as heat, warming the Earth's surface and oceans. The primary GHGs emitted by human activities (and estimated by EPA in its annual inventories) include CO_2, methane, nitrous oxide (N_2O), sulfur hexafluoride (SF_6), chlorofluorocarbons, hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). Other GHGs include carbonaceous and sulfuric aerosols, hydrochlorofluorocarbons, and elevated tropospheric ozone pollution generated by emissions of nitrogen oxides and volatile organic compounds, such as solvents.

[2] For the latest U.S. assessment of the human contribution to climate change, see Intergovernmental Panel on Climate Change, *Global Warming of 1.5°C, Special Report*, 2018; and U.S. Global Change Research Program, *Fourth National Climate Assessment, vol. II: Impacts, Risks, and Adaptation in the United States*, 2018. See also CRS Report R45086, *Evolving Assessments of Human and Natural Contributions to Climate Change*, by Jane A. Leggett.

[3] Some countries have levied carbon taxes (or something similar) for over 20 years. For a review of carbon prices in other countries, see OECD, *Effective Carbon Rates: Pricing CO_2 through Taxes and Emissions Trading Systems*, 2016, http://www.oecd-ilibrary.org/taxation/effective-carbon-rates_9789264260115-en; and the Carbon Tax Center website at http://www.carbontax.org/where-carbon-is-taxed.

[4] A number of U.S. states have taken action requiring GHG emission reductions. The most aggressive actions have come from California and from the Regional Greenhouse Gas Initiative (RGGI)—a coalition of nine states from the Northeast and Mid-Atlantic regions. The RGGI is a cap-and-trade system that took effect in 2009 that applies to CO_2 emissions from electric power plants. (See CRS Report R41836, *The Regional Greenhouse Gas Initiative: Background, Impacts, and Selected Issues*, by Jonathan L. Ramseur.) California established a cap-and-trade program that took effect in 2013. California's cap covers multiple GHGs, which account for approximately 85% of California's GHG emissions. For more details, see the California Air Resources Board website, https://www.arb.ca.gov/cc/capandtrade/capandtrade.htm. In addition to its emissions cap, California has adopted a range of other climate change mitigation policies (e.g., renewable energy portfolio standards).

[5] Other approaches may include performance-based or technology-based standards (e.g., best available control technology). See CRS Report R41973, *Climate Change: Conceptual Approaches and Policy Tools*, by Jane A. Leggett.

[6] The 1990 Clean Air Act Amendments established a market-based cap-and-trade program to control the air emissions (sulfur dioxide and nitrogen oxides) that lead to acid rain. Although controversial at its inception, the program is widely considered a success. See, for example, Gabriel Chan et al., *The SO_2 Allowance Trading System and the Clean Air Act Amendments of 1990: Reflections on Twenty Years of Policy Innovation*, Harvard Environmental Economics Program, 2012, https://www.belfercenter.org/sites/default/files/legacy/files/so2-brief_digital4_final.pdf.

GHG emissions—legislation that promotes renewable energy[7] or encourages carbon capture and sequestration[8]—but these bills are not discussed in this report.

In addition, starting in the 112th Congress, some Members have introduced resolutions in the House and Senate expressing the view that a carbon tax is not in the economic interests of the United States. In September 2018, the House passed a resolution "expressing the sense of Congress that a carbon tax would be detrimental to the United States economy" (H.Con.Res. 119).[9] An analogous resolution was not introduced in the Senate in the 115th Congress.

As **Figure 2** illustrates, between the 108th and 111th Congresses, most of the introduced bills would have established cap-and-trade systems. Between the 112th and 115th Congresses, most of the introduced bills would have established carbon tax or emissions fee programs.

In the 111th Congress, Members offered multiple and varied proposals,[10] ultimately resulting in the House passage of H.R. 2454, an economy-wide cap-and-trade bill.[11] A companion bill in the Senate (S. 1733) was ordered reported from the Committee on Environment and Public Works, but the bill was never brought to the Senate floor for consideration.

In subsequent Congresses, some Members continued to offer GHG emission control legislation, but these proposals saw minimal legislative activity. During that time frame, the U.S. Environmental Protection Agency (EPA) used existing Clean Air Act authorities to promulgate GHG emission standards for key sectors, including the electric power and transportation sectors.[12] EPA rulemakings in this area—particularly the 2015 Clean Power Plan final rule[13] and the 2019 Affordable Clean Energy final rule[14]—continue to generate interest and debate in Congress.

The proposals from the 116th Congress range in their scope of emissions covered from CO_2 emissions from fossil fuel combustion to multiple GHG emissions from a broader array of sources. In addition, the proposals differ by how, to whom, and for what purpose the fee revenues or allowance value would be applied. Some economic analyses indicate that policy choices to distribute the tax, fee, or emission allowance revenue would yield greater economic impacts than the direct impacts of the carbon price.[15]

The first section of this report provides background information on cap-and-trade and carbon tax or emission fee programs. The second section compares the GHG emission reduction legislation in each Congress (108th-116th).

[7] See CRS In Focus IF10479, *The Energy Credit: An Investment Tax Credit for Renewable Energy*, by Molly F. Sherlock.

[8] See CRS Report R44902, *Carbon Capture and Sequestration (CCS) in the United States*, by Peter Folger.

[9] The House passed an identical resolution in the 114th Congress (H.Con.Res. 89).

[10] See CRS Report R40556, *Market-Based Greenhouse Gas Control: Selected Proposals in the 111th Congress*, by Larry Parker, Brent D. Yacobucci, and Jonathan L. Ramseur.

[11] H.R. 2454 (111th Congress), which was introduced by Representatives Waxman and Markey, would have covered approximately 85% of the U.S. GHG emissions. Although not complete coverage, this approach is typically described as economy-wide.

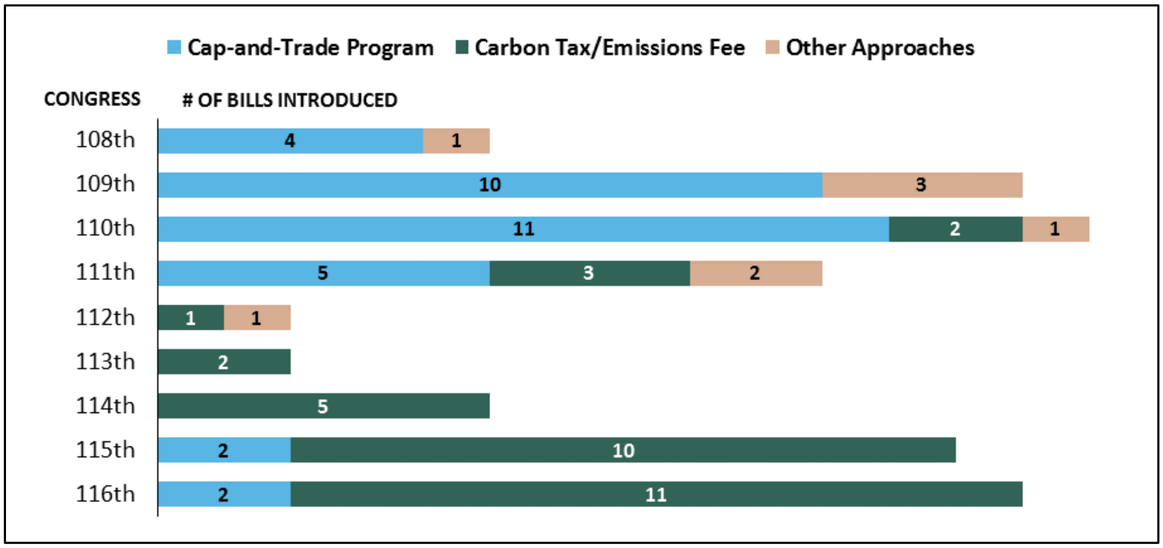
[12] See CRS Report R45204, *Vehicle Fuel Economy and Greenhouse Gas Standards: Frequently Asked Questions*, by Richard K. Lattanzio, Linda Tsang, and Bill Canis.

[13] For more details, see CRS Report R44341, *EPA's Clean Power Plan for Existing Power Plants: Frequently Asked Questions*, by James E. McCarthy et al.

[14] For more details, see CRS Insight IN11142, *EPA Repeals the Clean Power Plan and Finalizes Affordable Clean Energy Rule*, by Kate C. Shouse and CRS Report R45393, *EPA's Affordable Clean Energy Proposal*, by Kate C. Shouse, Jonathan L. Ramseur, and Linda Tsang.

[15] For more information, see CRS Report R45625, *Attaching a Price to Greenhouse Gas Emissions with a Carbon Tax or Emissions Fee: Considerations and Potential Impacts*, by Jonathan L. Ramseur and Jane A. Leggett.

Figure 2. Number and Type of Market-Based GHG Emission Reduction Bills Introduced in 108th Congress through 116th Congress



Source: Prepared by CRS.

Notes: "Other Approaches" include (1) proposals that did not specify the overall framework but would have provided EPA with the authority to establish a GHG emission reduction program and (2) proposals that combine elements from a cap-and-trade system with price control features in a carbon tax or emissions fee system, sometimes described as hybrid approaches.

Background

Over the last 15 years, broad GHG emission reduction legislation has generally involved market-based approaches—such as cap-and-trade systems or carbon tax programs—that rely on private sector choices and market forces to minimize the costs of emission reductions and spur innovation.[16] Both carbon tax and emissions cap-and-trade programs would place a price—directly or indirectly—on GHG emissions or their inputs (e.g., fossil fuels), both would increase the price of fossil fuels for the consumer, and both would reduce GHG emissions to some degree. Preference between the two approaches ultimately depends on which variable policymakers prefer to precisely control: emission levels or emission prices. As a practical matter, these market-based policies may include complementary or hybrid designs, incorporating elements to increase certainty in price or emissions quantity. For example, legislation could provide mechanisms for adjusting a carbon tax/fee if a targeted range of emissions reductions were not achieved in a given period. Alternatively, legislation could include mechanisms that would bound the range of market prices for a cap-and-trade system's emissions allowances to improve price certainty.

What Is a GHG Emissions Cap-and-Trade System?

A GHG cap-and-trade system creates an overall limit, or cap, on GHG emissions from certain sources. Cap-and-trade programs can vary by the sources covered, which often include major

[16] In some instances, legislation would have directed EPA to establish a GHG emissions reduction program with a market-based approach as one option. An alternative approach to a market-based system might involve regulatory directives that require emission performance standards for specific sources or the application of best available control technology.

emitting sectors (e.g., power plants and carbon-intensive industries), fuel producers and/or processors (e.g., coal mines or petroleum refineries), or some combination of both.

The emissions cap is partitioned into *emission allowances*. Typically, in a GHG cap-and-trade system, one emission allowance represents the authority to emit one metric ton[17] of carbon dioxide-equivalent (mtCO_2e).[18] The emissions cap creates a new commodity—the emission allowance. Policymakers may decide to distribute the emission allowances to covered entities at no cost (based on, for example, previous years' emissions), sell the allowances (e.g., through an auction), or use some combination of these strategies. The distribution of emission allowances is typically a source of significant debate during a cap-and-trade program's development, because the allowances have monetary value.

At the end of each established compliance period (e.g., a calendar year or multiple years), covered sources submit emission allowances to an implementing agency to cover the number of tons emitted. If a source did not provide enough allowances to cover its emissions, the source would be subject to penalties. Covered sources would have a financial incentive to make reductions beyond what is required, because they could (1) sell or trade unused emission allowances to entities that face higher costs to reduce their facility emissions, (2) reduce the number of emission allowance they need to purchase, or (3) bank them, if allowed, to use in a future year.

The use of emission offsets as a compliance option received attention during debate over cap-and-trade programs. An offset is a measurable reduction, avoidance, or sequestration of GHG emissions from a source not covered by an emission reduction program. Economic analyses of cap-and-trade proposals concluded that offset treatment (i.e., whether or not to allow their use and, if so, to what degree) would have a substantial impact on overall program cost. This is because some emissions and sources often not covered in cap-and-trade programs can reduce emissions at a lower cost per ton than many typically covered sources. However, the use of offsets generates considerable controversy, primarily over the concern that difficult-to-assess or fraudulent offsets could create uncertainty about the quantity of emission reductions.[19]

In addition, other mechanisms—such as allowance banking or borrowing—may be included to increase the flexibility of the program and, generally, reduce the costs.

What Is a Carbon Tax or Emissions Fee?

In a carbon tax or emissions fee program, policymakers attach a price to GHG emissions or the inputs that create them. A carbon tax/fee on emissions or emissions inputs—namely fossil fuels—would increase the relative price of the more carbon-intensive energy sources. This result is

[17] A metric ton is approximately 2,205 pounds. A short ton equals 2,000 pounds.

[18] This term of measure (CO_2e) is used because GHGs vary by global warming potential (GWP). GWP is an index developed by the Intergovernmental Panel on Climate Change (IPCC) that allows comparisons of the heat-trapping ability of different gases over a period of time, typically 100 years. Consistent with international GHG reporting requirements, EPA's most recent GHG inventory (2018) uses the GWP values presented in the IPCC's 2007 Fourth Assessment Report. For example, based on these GWP values, a ton of methane is 25 times more potent than a ton of CO_2 when averaged over a 100-year time frame. The IPCC has since updated the 100-year GWP estimates, with some increasing and some decreasing. For example, the IPCC 2013 Fifth Assessment Report reported the 100-year GWP for methane as ranging from 28 to 36. EPA compares the 100-year GWP values in Table 1-3 of its 2018 GHG Inventory.

[19] Both the RGGI and California cap-and-trade systems allow offsets as a compliance option (see footnote 4).

expected to spur innovation in less carbon-intensive technologies and stimulate other behavior that may decrease emissions.[20]

Economic modeling indicates that a carbon tax/fee approach could achieve emission reductions, the level of which would depend on the scope and stringency (i.e., tax or fee level) of the program.[21] For example, to address emissions from fossil fuel combustion—76% of total U.S. GHG emissions[22]—policymakers could apply a tax/fee to fossil fuels at approximately 3,000 entities, including coal mines, petroleum refineries, and entities required to report natural gas deliveries.[23]

A carbon tax/fee would generate a new revenue stream. The magnitude of the revenues would depend on the scope and rate of the tax or fee, the responsiveness of covered entities in reducing their potential emissions, and multiple other market factors. A 2016 Congressional Budget Office study estimated that a $25/ton carbon tax would yield approximately $100 billion in the first year of the program.[24]

When designing a carbon tax/fee system, one of the more controversial and challenging questions for policymakers is how, to whom, and for what purpose the new tax or fee revenues could be applied. Congress would face the same issues that would be encountered during a debate over emission allowance value distribution in a cap-and-trade system.

When deciding how to allocate the revenues, policymakers would encounter trade-offs among objectives. The central trade-offs involve minimizing economy-wide costs, lessening the costs borne by specific groups—particularly low-income households and displaced workers or communities—and supporting a range of specific policy objectives.

A primary argument against a carbon tax/fee system (and a cap-and-trade program) is the concern about the economy-wide costs that a carbon price could impose. The potential costs would depend on a number of factors, including the magnitude, design, and use of revenues of the carbon tax or fee.

Others who may oppose a carbon tax system express opposition to federal taxes in general or the possibility that the revenues would enable greater federal spending. Owners of coal resources, in particular, would likely lose asset values under a carbon tax system—as under a cap-and-trade system—to the degree that coal becomes less competitive under the costs of emission reductions.

[20] This differs from a price system that applies to energy content, such as a tax based on British thermal units (Btu). In 1993, President Clinton proposed a deficit reduction package that included a tax based on energy content, measured in Btu. The goals of the 1993 Btu tax proposal were to promote energy conservation and raise revenue. At the time, the proposed tax would have generated a new revenue stream of about $30 billion per year. The proposal was met with strong opposition and was not enacted; Congress ultimately enacted an approximately five-cent-per-gallon increase in the motor fuels taxes.

[21] See, for example, Alexander R. Barron et al., "Policy Insights from the EMF 32 Study on U.S. Carbon Tax Scenarios," *Climate Change Economics*, vol. 9, no. 1 (2018).

[22] EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2017*, April 2019.

[23] See Table A-1 in CRS Report R45625, *Attaching a Price to Greenhouse Gas Emissions with a Carbon Tax or Emissions Fee: Considerations and Potential Impacts*, by Jonathan L. Ramseur and Jane A. Leggett.

[24] Congressional Budget Office, *Options for Reducing the Deficit: 2017-2026*, 2016.

GHG Emission Reduction Legislation by Congress

This section compares GHG emission reduction legislation from the 108th Congress to the 116th Congress by including a separate legislative table for each Congress.[25] The tables compare the bills by their overall framework, scope, stringency, and selected design elements. Categories of comparison include

- **General framework:** the proposed program structure—emissions cap, emissions tax or fee, or some combination of both—and scope in terms of emissions covered (multiple GHG emissions or just CO_2 emissions).
- **Covered entities/materials:** the industries, sectors, or materials that would be subject to the program.
- **Emissions limit or target:** the GHG or CO_2 emissions target or cap for a particular year. Some targets/caps would apply only to covered sources; others apply to total U.S. GHG emissions.
- **Distribution of allowance value or tax revenue:** how emission allowance value or carbon tax or fee revenue would be distributed (if applicable).
- **Offset and international allowance treatment:** the degree to which offsets and international allowances could be used for compliance purposes and the types of offset activities that would qualify. Some proposals limit offsets by percentage of required reductions; others limit offsets as a percentage of allowance submissions.
- **Mechanism to address carbon-intensive imports:** a central concern with a U.S. GHG reduction program is that it could raise U.S. prices more than goods manufactured abroad, potentially creating a competitive disadvantage for some domestic businesses, particularly carbon-intensive, trade-exposed industries. Policymakers could address these potential impacts in several ways—for example, through border adjustments, tax rebates, or emission allowances provided at no cost to selected industrial sectors.
- **Additional GHG reduction measures:** other mechanisms that are designed to further reduce GHG emissions that are not covered in the central program.

[25] One GHG emission reduction bill was introduced in the 107th Congress. Senator Jeffords introduced S. 556, which would have amended the Clean Air Act to reduce CO_2 emissions from electric power plants to below 1990 levels.

Table 1. GHG Emission Reduction Proposals: 108th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
S. 139 Lieberman Jan. 9, 2003 *Discharged by unanimous consent by the Senate Committee on Environment and Public Works on Oct. 29, 2003* S.Amdt. 2028, *which contained similar provisions, was not agreed to on Oct. 30, 2003*	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	Cap of 5,896 $mtCO_2e$ for covered sources by 2010 (equivalent to 2000 levels), reduced by the level of emissions from non-covered sources; cap of 5,123 $mtCO_2e$ for covered sources by 2016 (equivalent to 1990 levels), reduced by the level of emissions from non-covered sources	Determined by the Secretary of Commerce; allowances provided to covered entities at no cost and to the newly established, nonprofit Climate Change Credit Corporation, which may use allowance to help energy consumers with increased prices and provide transition assistance to dislocated workers and communities	From 2010 through 2015, up to 15% of submitted allowances can come from domestic or international offsets; after 2015, 10% of submitted allowance can come from offsets	No specific provision	No specific provision
S. 366 Jeffords Feb. 12, 2003	Cap-and-trade system for CO_2 emissions from power plants; also addresses other air pollutants (mercury,	Fossil-fuel-fired electric generating facilities with a capacity of greater than 15 megawatts	Cap on electric power emissions of 2.05 billion metric tons in 2009 (equivalent to 1995 emissions)	EPA allocates free allowances to the following: 60% to households to alleviate increased electricity prices	No specific provision	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	sulfur dioxide, nitrogen oxide)			6% for worker transition assistance 20% for renewable energy and energy efficiency 10% to electricity generation facilities 1% for forest sequestration 2% for geologic sequestration			
S. 843 Carper Apr. 9, 2003	Cap-and-trade system for CO_2 emissions from electricity sector; also addresses other air pollutants (mercury, sulfur dioxide, nitrogen oxide)	Fossil-fuel-fired electric generating facility that has a capacity of greater than 25 megawatts and generates electricity for sale	Cap on electric power emissions of 2006 levels in 2009; lowered to 2001 levels in 2013	Allotted to covered sources at no cost based on previous year's emission levels (minus a reserve set aside for new units)	Determined by EPA	No specific provision	No specific provision
H.R. 2042 Waxman May 8, 2003	Directs EPA to issue regulations to meet CO_2 emissions goals; may include a market-based	Fossil-fuel-fired electric generating facility that has a capacity of greater than 25 megawatts and generates electricity for sale	1990 CO_2 levels for power plants by 2009	No specific provision	No specific provision	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	approach; also addresses other air pollutants (mercury, sulfur dioxide, nitrogen oxide)						
H.R. 4067 Gilchrest Mar. 30, 2004	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	1990 GHG levels for covered sources, reduced by the level of emissions from non-covered sources by 2020	Determined by the Secretary of Commerce; allowances provided to covered entities at no cost and to the newly established, nonprofit Climate Change Credit Corporation, which may use allowance to help energy consumers with increased prices and provide transition assistance to dislocated workers and communities, among other objectives	Up to 15% of submitted allowances can come from domestic or international offsets; if offsets account for 15% of allowances, at least 1.5% must come from agricultural sequestration	No specific provision	No specific provision

Source: Prepared by CRS.

Table 2. GHG Emission Reduction Proposals: 109th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
S. 150 Jeffords Jan. 25, 2005	Cap-and-trade system for CO_2 emissions from power plants; also addresses other air pollutants (mercury, sulfur dioxide, nitrogen oxide)	Fossil-fuel-fired electric generating facilities with a capacity of greater than 15 megawatts	Cap on electric power emissions of 2.05 billion metric tons in 2010	In 2010, EPA allocates free allowance to the following: 60% to households to alleviate increased electricity prices 6% for worker transition assistance 20% for renewable energy and energy efficiency 10% to electricity generation facilities 1% for forest sequestration 2% for geologic sequestration	No specific provision	No specific provision	No specific provision
S. 342 McCain Feb. 10, 2005	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when	Cap of 5,896 $mtCO_2e$ for covered sources by 2010 (equivalent to 2000 levels),	Determined by the Secretary of Commerce; allowances provided to covered entities at no cost and to the newly established, nonprofit Climate Change Credit Corporation, which	Up to 15% of submitted allowances can come from domestic or international offsets; if offsets account for 15% of allowances, at	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
		combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	reduced by the level of emissions from non-covered sources	may use allowance to help energy consumers with increased prices and provide transition assistance to dislocated workers and communities, among other objectives	least 1.5% must come from agricultural sequestration		
H.R. 759 Gilchrest Feb. 10, 2005	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	Cap of 5,896 $mtCO_2e$ for covered sources by 2010 (equivalent to 2000 levels), reduced by the level of emissions from non-covered sources	Determined by the Secretary of Commerce; allowances provided to covered entities at no cost and to the newly established, nonprofit Climate Change Credit Corporation, which may use allowance to help energy consumers with increased prices and provide transition assistance to dislocated workers and communities, among other objectives	Up to 15% of submitted allowances can come from domestic or international offsets; if offsets account for 15% of allowances, at least 1.5% must come from agricultural sequestration	No specific provision	No specific provision
H.R. 1451 Waxman Mar. 17, 2005	Directs EPA to issue regulations to meet CO_2 emissions goals; may include a market-based approach; also addresses other air	Fossil-fuel-fired electric generating facilities that have a capacity of greater than 25 megawatts	1990 CO_2 levels for power plants by 2010	No specific provision	No specific provision	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	pollutants (mercury, sulfur dioxide, nitrogen oxide)	and generate electricity for sale					
S. 730 Leahy Apr. 6, 2005	EPA determines the framework of the program; also addresses other air pollutants (mercury, sulfur dioxide, nitrogen oxide)	Fossil-fuel-fired electric generating facilities (no minimum threshold)	Cap on electric power emissions of 2.05 billion metric tons in 2010	No specific provision	No specific provision	No specific provision	No specific provision
H.R. 1873 Bass Apr. 27, 2005	Cap-and-trade system for CO_2 emissions from electricity sector; also addresses other air pollutants (mercury, sulfur dioxide, nitrogen oxide)	Fossil-fuel-fired electric generating facilities that have a capacity of greater than 25 megawatts and generate electricity for sale	Cap on electric power emissions of 2006 levels in 2010; lowered to 2001 levels in 2015	Allotted to covered sources at no cost based on previous years emission levels (minus a reserve set aside for new units)	Determined by EPA	No specific provision	No specific provision
S. 1151 McCain May 26, 2005	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any	Cap of 5,896 $mtCO_2e$ for covered sources by 2010 (equivalent to 2000 levels), reduced by the level of emissions	Determined by the Secretary of Commerce; allowances provided to covered entities at no cost and to the newly established, nonprofit Climate Change Credit Corporation, which may use allowance to help energy consumers with increased prices	Up to 15% of submitted allowances can come from domestic or international offsets; if offsets account for 15% of allowances, at least 1.5% must come from	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
		importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	from non-covered sources	and provide transition assistance to dislocated workers and communities, among other objectives	agricultural sequestration		
H.R. 2828 Inslee June 9, 2005	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	Cap of 5,896 $mtCO_2e$ for covered sources by 2010 (equivalent to 2000 levels), reduced by the level of emissions from non-covered sources	Determined by the Secretary of Commerce; allowances provided to covered entities at no cost and to the newly established, nonprofit Climate Change Credit Corporation, which may use allowance to help energy consumers with increased prices and provide transition assistance to dislocated workers and communities, among other objectives	Up to 15% of submitted allowances can come from domestic or international offsets; if offsets account for 15% of allowances, at least 1.5% must come from agricultural sequestration	No specific provision	No specific provision
H.R. 5049 Udall Mar. 29, 2006	Cap-and-trade system for GHG emissions from multiple sectors, with a price ceiling of $25 per ton of carbon, indexed to inflation	Emissions from domestic and imported fossil fuels; emissions from agricultural, industrial, and manufacturing processes, excluding methane from animals	Maintains existing emission levels; the number of allowances distributed based on emissions	20% to electric power, fossil fuel production, and energy intensive industries 15% to states for worker transition assistance	Provides additional allowances for sequestration projects	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
			from years prior to enactment, without reductions in subsequent years	5% to states for energy assistance to low-income households 25% to the Department of Energy to support energy research and development 10% to the Department of State to invest in low-emission and emission-free policies in developing countries 25% to the Department of the Treasury to be sold at auction with the proceeds deposited in the Treasury			
S. 2724 Carper May 4, 2006	Cap-and-trade system for CO_2 emissions from electricity sector; also addresses other air pollutants (mercury, sulfur dioxide, nitrogen oxide)	Fossil-fuel-fired electric generating facilities that have a capacity of greater than 25 megawatts and generate electricity for sale	2001 CO_2 emission levels by 2015	Allotted to covered sources based on previous years emission levels	Determined by EPA	No specific provision	No specific provision
H.R. 5642 Waxman June 20, 2006	Cap-and-trade system for GHG	Determined by EPA	1990 GHG levels for covered sources by 2020; 80% below 1990	Determined by the President based on plan submitted to Congress; sell via auction and distribute to non-covered sources to	No specific provision	No specific provision	EPA to promulgate additional regulations to reduce GHG emissions,

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
			levels by 2050	achieve specified goals: maximize public benefit, mitigate energy costs to consumers, provide worker transition assistance, among others			including performance standards, efficiency standards, technology requirements, among others; directs Department of Energy to promulgate renewable portfolio standards
S. 3698 Jeffords July 20, 2006	Directs EPA to issue regulations to meet GHG emissions goals; may include a market-based approach	Determined by EPA	1990 GHG levels by 2020; 80% below1990 levels by 2050	Determined by EPA; allowances to covered entities; remaining allowances to households, communities, and other groups for various objectives	No specific provision	No specific provision; allowances may be allotted to companies that experience disproportionate impacts from lower-carbon economy	Directs EPA to issue CO_2 emissions standards for vehicles and CO_2 emissions standards for new power plants, create low-carbon electricity generation standards and trading program, promulgate

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
							electricity efficiency standards, and establish renewable energy portfolio standards
S. 4039 Kerry Sept. 29, 2006	Cap-and-trade system for GHG emissions	Determined by EPA through a rulemaking process	1990 GHG levels for covered sources by 2020	Determined by the President; Congress may enact alternative plan within one year	No specific provision	No specific provision	No specific provision

Source: Prepared by CRS.

Table 3. GHG Emission Reduction Proposals: 110th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
S. 280 Lieberman Jan. 12, 2007	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFC, PFC, and SF_6 that, when used, will emit over 10,000 $mtCO_2e$	1990 GHG levels for covered sources by 2020, reduced by the level of emissions from non-covered sources	Determined by EPA	Up to 15% of submitted allowances can come from domestic or international offsets; if offsets account for 15% of allowances, at least 1.5% must come from agricultural sequestration	No specific provision	No specific provision
S. 309 Sanders Jan. 16, 2007	Determined by EPA, but must be a market-based program for GHG emissions	Determined by EPA through a rulemaking process	1990 GHG levels for all sources by 2020	Determined by EPA	No specific provision	No specific provision	GHG emission standards for vehicles, new electric power plants, and an energy efficiency performance standard
S. 317 Feinstein Jan. 17, 2007	Cap-and-trade system for GHG emissions from electricity sector	Fossil-fuel-fired electric generating facilities with a capacity of greater than 25 megawatts	5% below 2001 GHG levels for electric	Initially provided to covered entities at no cost; percentage of allowances sold via auction gradually	Up to 25% of required reductions may be achieved with EPA-approved	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
			generators by 2020	increases: by 2036, 100% sold via auction; activities funded by auction revenues include technology development and energy efficiency	international credits		
H.R. 620 Olver Jan. 22, 2007	Cap-and-trade system for GHG emissions from multiple sectors	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; any refiner or importer of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and any importer or producer of HFCs, PFCs, or SF_6 that, when used, will emit over 10,000 $mtCO_2e$	1990 GHG levels for covered sources by 2020, reduced by the level of emissions from non-covered sources	Determined by EPA	Up to 15% of allowance submission can come from domestic and/or international offsets	No specific provision	No specific provision
S. 485 Kerry Feb. 1, 2007	Cap-and-trade system for GHG emissions	Determined by EPA through a rulemaking process	1990 GHG levels for covered sources by 2020	Determined by the President; Congress may enact alternative plan within one year	No specific provision	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 1590 Waxman Mar. 20, 2007	Cap-and-trade system for GHG emissions	Determined by EPA through a rulemaking process	1990 GHG levels for all sources by 2020	Determined by the President; Congress may enact alternative plan within one year	No specific provision	No specific provision	GHG emission standards for vehicles, energy efficiency standards, renewable portfolio standards
H.R. 2069 Stark Apr. 26, 2007	Tax starting at $10/short ton of carbon content in taxable fuels, which equates to approximately $2.70/t$CO_2$ emissions The rate increases $10 per year (in nominal dollars)	Manufacturers, producers, or importers who sell a taxable fuel, which includes coal, petroleum and petroleum products, and natural gas	Tax rate freeze if CO_2 emissions do not exceed 20% of U.S. 1990 CO_2 emissions by 2020	No specific provision	NA	No specific provision	No specific provision
S. 1766 Bingaman July 11, 2007	Cap-and-trade system for GHG emissions from multiple sectors with allowance price ceiling: in 2012, $12/ton, increasing by 5% annually plus inflation	Petroleum refineries, natural gas processing plants, and imports of petroleum products, coke, or natural gas; entities that consume more than 5,000 tons of coal a year; importers of HFCs, PFC, SF_6, N2O, or products containing such compounds, and adipic acid and nitric acid	1990 GHG levels for covered sources by 2020	In 2012, 53% of allowances allocated to covered and certain industrial entities 23% allocated to states and for sequestration and early reduction activities 24% are auctioned to fund low-income	Unlimited use of domestic offsets; international offsets limited to 10% of a regulated entity's emissions target	International reserve allowances must accompany imports of any covered GHG intensive goods and primary products to the United States Least developed nations or those that contribute	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
		plants, aluminum smelters, and facilities that emit HFCs as a byproduct of HCFC production		assistance, carbon capture and storage, and adaptation activities The percentage auctioned increases steadily, reaching 53% by 2030		no more than 0.5% of global emissions are excluded	
H.R. 3416 Larson Aug. 3, 2007	Tax on CO_2 content on fossil fuels, starting at $15/short ton CO_2 emissions, increasing by 10% annually plus inflation	Manufacturers, producers, or importers of coal, petroleum, and natural gas	No specific provision	In first year (2008), approximately 76% would support a payroll tax rebate 16% would fund clean energy technology 8% would support affected industry transition assistance (declining to zero by 2017)	Allows for domestic offset projects (as prescribed by the Secretary of the Treasury) to be submitted as tax credits or tax refunds	No specific provision other than direct assistance to affected industries (determined by the Secretaries of the Treasury and Labor)	No specific provision
H.R. 4226 Gilchrest Nov. 15, 2007	Cap-and-trade system for GHG emissions from multiple sectors A Carbon Market Efficiency Board may implement cost-relief measures	Electric power, industrial, or commercial entities that emit over 10,000 $mtCO_2e$ annually; refiners or importers of petroleum products for transportation use that, when combusted, will emit over 10,000 $mtCO_2e$ annually; and	85% of 2006 GHG levels from covered sources, reduced by the level of emissions from non-covered	Determined by EPA	Up to 15% of allowance submission can come from domestic and/or international offsets	The President may establish a program to require importers to pay the value of GHGs emitted during the production of goods or services	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
		importers or producers of HFCs, PFCs, or SF_6 that, when used, will emit over 10,000 $mtCO_2e$	sources by 2020			imported into the United States from countries that have no comparable emission restrictions to those of the United States	
S. 2191 Lieberman Oct. 18, 2007 *Ordered reported by the Senate Committee on Environment and Public Works on Dec. 5, 2007*	Cap-and-trade system for GHG emissions from multiple sectors	Producers or importers of petroleum or coal-based liquid or gaseous fuel that emits GHGs, or facilities that produce or import more than 10,000 $mtCO_2e$ of GHG chemicals annually; facilities that use more than 5,000 tons of coal annually; natural gas processing plants or importers (including liquid natural gas [LNG]); or facilities that emit more than 10,000 $mtCO_2e$ of HFCs annually as a byproduct of HFC production	Emission cap for covered sources in 2020 is 4.924 billion tCO_2e (19% below 2005 levels for covered sources)	In 2012: 40% of allowances allocated to covered electric utilities, industrial facilities, and coops 9% allocated to states for conservation, extra reductions, and other activities 11.5% for various sequestration activities 10% allocated for electricity consumer assistance 5% for early reductions 0.5% for tribal governments	Up to 15% of allowance requirement may be achieved through domestic offsets; international offsets can satisfy an additional 15%	International reserve allowances must accompany imports of any covered GHG-intensive goods and primary products to the United States Least developed nations or those that contribute no more than 0.5% of global emissions are excluded	Low carbon fuel standard for transportation fuels

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				18% (plus an early auction of 6%) auctioned to fund technology deployment, carbon capture and storage, low-income and rural assistance, and adaptation activities			
S. 3036 Boxer May 20, 2008 S.Amdt. 4825 *(in the nature of substitute) failed a cloture motion on June 6, 2008*	Cap-and-trade system for GHG emissions from multiple sectors A Carbon Market Efficiency Board may implement cost-relief measures if necessary	Producers or importers of petroleum- or coal-based liquid or gaseous fuel that emits GHGs, or facilities that produce or import more than 10,000 $mtCO_2e$ of GHG chemicals annually; facilities that use more than 5,000 tons of coal annually; natural gas processing plants or importers (including LNG); or facilities that emit more than 10,000 $mtCO_2e$ of HFCs annually as a byproduct of HFC production	Emission cap for covered sources in 2020 is 4.924 billion tCO_2e (19% below 2005 levels for covered sources)	A share of allowances are auctioned for deficit reduction increasing from 6.1% in 2012 to 15.99% in 2031 and thereafter The "remainder allowances" are distributed in 2012 (adjusted in future years) as follows: 38% of allowances to covered electric utilities, industrial facilities, and co-ops 10.5% to states for conservation, extra reductions, and other activities	Up to 15% of allowance requirement may be achieved through domestic offsets; international allowances can satisfy an additional 15%	International reserve allowances must accompany imports of any covered GHG-intensive goods and primary products to the United States Least developed nations or those that contribute no more than 0.5% of global emissions are excluded	Low carbon fuel standard for transportation fuels

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				7.5% for various sequestration activities 11% allocated for electricity and natural gas consumer assistance 5% for early reductions 0.5% for tribal governments 1% for methane reduction projects 21.5% (plus an early auction of 5%) auctioned to fund technology deployment, carbon capture and storage, low income and rural assistance, and adaptation activities, as well as program management			
H.R. 6186 Markey June 4, 2008	Cap-and-trade system for GHG emissions from multiple sectors	Electric power or industrial facilities that emit over 10,000 $mtCO_2e$; producers or importers of petroleum or coal-based liquid products that, when	Emission cap for covered sources in 2020 is 4.983 billion tCO_2e	Between 2012 and 2019, 6% of allowances would be distributed to manufacturers of	Up to 15% of allowance requirement may be achieved through domestic offsets; international	International reserve allowances must accompany imports of any covered GHG intensive goods	EPA to develop emission performance standards for certain non-covered entities

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
		combusted, will emit over 10,000 $mtCO_2e$ annually; local distribution companies that deliver natural gas that, when combusted, will emit over 10,000 tCO_2e annually; producers or importers of HFCs, PFCs, SF_6, or NF_3 that, when used, will emit over 10,000 $mtCO_2e$; sites at which CO_2 is geologically sequestered on a commercial scale		"trade-exposed primary goods" Remaining 94% auctioned (100% by 2020), with revenues distributed (in FY2010-FY2019) as follows: 58.5% to middle- and low-income households as tax credits and/or rebates 12.5% for development and promotion of low-carbon technology 12.5% for energy efficiency programs 4.5% for biological sequestration 1.5% for worker transition assistance 2% for domestic adaptation efforts 1.5% for protection of natural resources 1.5% for international forest protection	offsets or allowances can satisfy an additional 15%	and primary products to the United States Least developed nations or those that contribute no more than 0.5% of global emissions are excluded	that exceed 10,000 tCO_2e per year Low-carbon fuel standard for transportation fuels Performance standard for certain coal-fired power plants to capture and geologically sequester not less than 85% of their CO_2 emissions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				3.5% for international clean technology 2% for international adaptation efforts			
H.R. 6316 Doggett June 19, 2008	Cap-and-trade system for GHG emissions from multiple sectors A Carbon Market Efficiency Board may implement cost-relief measures	Producers or importers of petroleum- or coal-based liquid or gaseous fuel that emits GHGs, or facilities that produce or import more than 10,000 $mtCO_2e$ of GHG chemicals annually; facilities that use more than 5,000 tons of coal annually; natural gas processing plants or importers (including LNG); or, facilities that emit more than 10,000 $mtCO_2e$ of HFCs annually as a byproduct of HFC production	Emission cap for covered sources in 2020 is 6.087 billion $mtCO_2e$	In 2012, 5% of the allowances are allocated to electric generators; 10% are allocated to energy intensive industries Remaining allowances are auctioned with revenues used for the following: 54% for consumer assistance (66% of which goes towards providing health insurance coverage, the remainder for rebates and tax relief) 15% of revenues for deficit reduction 11.4% for international activities	Up to 10% of allowance requirement may be achieved through domestic offsets; international allowances can satisfy an additional 15%	International reserve allowances must accompany imports of any covered GHG-intensive goods and primary products to the United States Least developed nations or those that contribute no more than 0.5% of global emissions are excluded	EPA to promulgate regulations that address emissions in uncovered sectors

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				7.5% for energy efficiency 7% for natural resource adaptation 7% for green energy research 4% for worker assistance 3% for forestry and agricultural activities 2.7% for states and tribes 2% for transportation alternatives 1% for early action 0.4% for education			

Source: Prepared by CRS.

Table 4. GHG Emission Reduction Proposals: 111th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 594 Stark Jan. 15, 2009	Tax on CO_2 content in fossil fuels, starting at $10/short ton, increasing by $10 per year	Manufacturers, producers, or importers who sell a taxable fuel, which includes coal, petroleum and petroleum products, and natural gas	Tax freezes if CO_2 emissions do not exceed 20% of U.S. 1990 CO_2 emissions by 2020	No specific provision	NA	No specific provision	No specific provision
H.R. 1337 Larson Mar. 5, 2009	Tax on CO_2 content in fossil fuels, starting at $15/short ton, increasing by $10 each year emissions target is not met	Manufacturers, producers, or importers of coal, petroleum, and natural gas	EPA is to establish (within five years after enactment) annual CO_2 emission targets in order to reach goal of 80% below 2005 CO_2 emissions by 2050	In first year: 76% would support a payroll tax rebate 16% would fund clean energy technology 8% would support affected industry transition assistance (declining to zero by 2017)	Instructs Department of the Treasury (in consultation with Department of Energy) to submit a report of qualified offset projects but does not allow for projects to generate tax credits	Department of the Treasury imposes a carbon equivalency fee on imported carbon-intensive goods, including steel, aluminum, and paper; fee based on emissions associated with production of carbon-intensive goods	No specific provision
H.R. 1666 Doggett Mar. 23, 2009	Cap-and-trade system for GHG emissions, with an oversight board to manage	Not explicitly defined	Target of 4.9 billion $mtCO_2e$ for covered	Oversight board administers auctions to manage the allowance price path; precise use of	No specific provision	No specific provision	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	price path between 2012 and 2019		entities by 2020	auction revenues is not specified			
H.R. 1683 McDermott Mar. 24, 2009	Hybrid cap/tax system for GHG emissions: covered persons must purchase an emission permit from the Department of the Treasury when a "GHG emission substance" is produced or enters the United States; permits may not be sold or exchanged; price for emission permits based on achieving annual emission targets	Coal producers, petroleum refineries; producers of other GHG emission substances (including natural gas, among others); importers of GHG emission substances	25% below 2005 GHG emissions by 2020	Establishes trust fund that would receive appropriations equal to revenue received by selling emission permits Precise use of the revenue is not specified	No specific provision	Department of the Treasury imposes a GHG emission permit equivalency fee on imported carbon-intensive goods, including steel, aluminum, and paper	No specific provision
H.R. 1862 Van Hollen Apr. 1, 2009	Cap-and-trade system for CO_2 emissions from multiple sectors	Person who makes the first sale in United States of coal, oil, natural gas, and any fossil-fuel-derived products used as a combustible fuel	25% below 2005 CO_2 emissions by 2020	100% of allowances sold via auction; proceeds used to fund consumer dividend payments; each month, every person with a Social Security number	No specific provision	Department of the Treasury imposes a carbon equivalency fee on imported carbon-intensive goods, including	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				would receive an equal payment		steel, aluminum, and paper	
H.R. 2380 Inglis May 13, 2009	Tax on fossil fuels, starting at $15/short ton of CO_2 emissions, and increasing by approximately 6.5% each year, plus cost-of-living adjustments	Manufacturers, producers, or importers of coal, petroleum, and natural gas	No specific provision	Tax revenue used to offset a corresponding reduction in payroll tax rates (employee, employer, and self-employed)	No specific provision	Imposes a tax on "imported taxable products" in relation to fossil fuels used or the CO_2 emissions generated during the product's manufacturing process	No specific provision
H.R. 2454 Waxman-Markey May 15, 2009 *Reported by the Committee on Energy and Commerce on June 5, 2009* *Passed the House on June 26, 2009* For more information, see CRS Report R40643, *Greenhouse Gas Legislation: Summary and Analysis of H.R. 2454 as Passed by*	Cap-and-trade system for GHG emissions from multiple sectors	Electricity generators, various fuel producers and importers, fluorinated gas producers and importers, geological sequestration sites, various industrial sources, and local distribution companies (LDCs) that deliver natural gas Covered entity coverage is phased in by category so that all of the above are under the cap in 2016	17% below 2005 emissions from covered sources by 2020	Emission allowance value distributed (as no-cost allowances or auction revenue) in the following manner in 2016: 30% (at minimum) to electricity LDCs; 0.5% for small electric LDCs; 9% to natural gas LDCs; 1.5% to states for home-heating oil consumers 15% directly to low-income consumers 13.4% to energy-intensive, trade-exposed industries;	In 2016, approximately 27% of an entity's allowance obligation can be satisfied with offsets; this percentage increases to 36% by 2030 Up to half of an entity's offsets can come from domestic sources and up to half from international sources Unless otherwise determined by	Energy-intensive, trade-exposed industries to receive allowances at no cost until phased out in mid-2030s; and EPA to promulgate rules establishing an international reserve allowance system for any covered good of an eligible industrial sector	Establishes a separate cap-and-trade program that controls HFC emissions Directs EPA to establish emission performance standards for select sources not covered by the emissions cap

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
the House of Representatives, coordinated by Mark Holt and Gene Whitney				up to 3.5% to merchant coal units; 2% to petroleum refineries plus 0.25% for small business refineries; up to 1.5% for certain long-term power contract operators 7.1% to states to support renewable energy and energy efficiency efforts 6% to promote technological advances 5% to reduce international deforestation 0.2% for deficit reduction 5% to further other objectives	EPA, covered entities may use unlimited amount of international allowances from "qualifying programs"	from a covered country Exemptions are provided for (1) least developed countries, (2) countries that emit less than 0.5% of global GHG emissions, and (3) countries meeting specific criteria	
S. 1733 Kerry-Boxer Sept. 30, 2009 *Reported by the Committee on Environment and Public Works (a*	Cap-and-trade system for GHG emissions from multiple sectors	Electricity generators, various fuel producers and importers, fluorinated gas producers and importers, geological sequestration sites, various industrial	20% below 2005 emissions from covered sources by 2020	Emission allowance value is distributed in the following manner in 2016: 25.8% (at minimum) to electricity LDCs;	In 2016, approximately 35% of an entity's allowance submission can comprise offsets; up to 75% of an entity's offsets	Trade-exposed, carbon-intensive industries to receive allowances at no cost; in addition, the bill states:	Establishes a separate cap-and-trade program that controls HFCs

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
"Manager's Amendment" in the nature of substitute) on Nov. 5, 2009		sources, and LDCs that deliver natural gas Coverage is phased in by category so that all of the above are under the cap in 2016		0.94% for small electric LDCs 7.7% to natural gas LDCs 1.3% to states for home-heating oil consumers 12.9% directly to low-income consumers 12.1% to energy-intensive, trade-exposed industries up to 3.0% to merchant coal units 0.64% to petroleum refineries plus 0.86% for small business refineries and 0.43% for medium refineries up to 1.3% for certain long-term power contract operators 5.97% to states to support renewable energy and energy efficiency efforts	can come from domestic sources and up to 25% from international sources Unless otherwise determined by EPA, unlimited use of international allowances from "qualifying programs"	"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"	

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				5.6% to promote technological advances 1.92% for GHG reductions in the transportation sector 10.3% for deficit reduction 8% to further other objectives			
S. 2877 Cantwell Dec. 11, 2009	Hybrid cap/tax system for CO_2 emissions: covered entities submit "carbon shares" for CO_2 emissions associated with the use of the fossil fuels Trading of carbon shares is restricted to a dedicated exchange established by Treasury Price ceiling for carbon shares: initially at $21/t$CO_2$ in	Fossil fuel producers (e.g., mines, wells) and importers who introduce "fossil carbon" into the United States economy	20% below 2005 GHG levels from all sources by 2020	All carbon shares sold in auctions Subject to the appropriations process, 75% of the revenue would be distributed monthly in non-taxable dividends to all legally residing individuals in the United States Subject to the appropriations process, 25% could be used to support a myriad of policy objectives, including worker transition assistance, adaptation,	Offsets are not allowed for compliance purposes	Treasury may impose fees for the "production process carbon" associated with commodities imported into the United States	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	2012; if reached, additional shares made available, and this revenue would support mitigation from non-covered entities			technology development, energy efficiency, biological sequestration, and deficit reduction			
Kerry-Lieberman Discussion Draft May 12, 2010 (considered by many to be the primary legislative vehicle in the Senate at the time)	Cap-and-trade system for GHG emissions from multiple sectors	Electricity generators, various fuel producers and importers, fluorinated gas producers and importers, geological sequestration sites, various industrial sources, and LDCs that deliver natural gas Covered entity coverage is phased in by category so that all of the above are under the cap in 2016	17% below 2005 emissions from covered sources by 2020	Emission allowance value distributed in the following manner in 2016: 30% (at minimum) to electric LDCs; 9% for natural gas LDCs; 1.5% to states for home-heating oil and propane consumers; 12.3% directly to low-income consumers 15% to trade-exposed industries; up to 0.5% to merchant coal units; 3.75% to petroleum refineries; up to 4.5% to long-term power contract operators	In 2016, approximately 35% of an entity's allowance submission can comprise offsets; up to 75% of an entity's offsets can come from domestic sources and up to 25% from international sources Unless otherwise determined by EPA, unlimited use of international allowances from "qualifying programs"	Trade-exposed, carbon-intensive industries to receive allowances at no cost EPA to establish an international reserve allowance system for covered goods of an eligible industrial sector from a covered country Exemptions are provided for (1) least developed countries, (2) countries that emit less than 0.5% of global GHG emissions, and (3) countries	Establishes a separate cap-and-trade program that controls HFC

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				2% to states to support renewable energy and energy efficiency efforts 4% to promote technological advances 9.2% to support transportation infrastructure and efficiency 6.75% for deficit reduction 1.5% auctioned to help mitigate against high allowance prices		meeting the specific criteria	

Source: Prepared by CRS.

Table 5. GHG Emission Reduction Proposals: 112th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 3242 Stark Oct. 24, 2011	Tax on CO_2 emissions from combustion of fossil fuels and other materials Rate starts at $10/short ton of CO_2 emissions, increasing by $10 per year until emissions target reached	Manufacturers, producers, or importers who sell coal, petroleum and petroleum products, natural gas, biomass, municipal solid waste, and any other organic material sold for energy use	80% reduction of CO_2 emission levels in 1990	Tax revenue is distributed annually in pro rata payments to individuals with a taxpayer identification number	No specific provision	Border adjustment fees for comparable imported products	No specific provision
H.R. 6338 McDermott Aug. 2, 2012	Hybrid cap/tax approach on GHG emissions: covered entities purchase permits from the Department of the Treasury for expected emissions associated with combustion or use of covered material (e.g., fossil fuels)	Coal producers, petroleum refineries, first seller of natural gas, producers and importers of GHG emission substances	Average emissions between 2015 and 2019 equal to GHG emissions in 2005 by 2020	75% of the permit revenue is used to send monthly dividend payments to taxpayers 25% retained for deficit reduction	No specific provision	Unless an exporting nation has implemented equivalent measures, imports of carbon-intensive goods will be subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the costs domestic producers of	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	Permits cannot be sold or traded Price floor and price ceiling (i.e., price collar), ranges between $6.25 and $18.75 in 2015					comparable products incur due to the carbon price Exporters of carbon-intensive goods may receive a payment related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	

Source: Prepared by CRS.

Table 6. GHG Emission Reduction Proposals: 113th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
S. 332 Sanders Feb. 14, 2013	Upstream tax/fee on fossil fuels based on their carbon content	EPA would impose a fee on coal, petroleum, and natural gas produced or imported into the United States	GHG emissions at 80% below 2005 levels by 2050	60% distributed to EPA to provide monthly rebates to legal residents 40% finances a trust fund that distributes the following amounts annually for 10 years: $7.5 billion to mitigate economic impacts of Energy Intensive Trade Exposed (EITE) industries (25% must be energy efficiency investments in EITE industries) $5 billion to support the Weatherization Assistance Program $1 billion for job training and transition assistance $2 billion for Advanced Research	No specific provision	A carbon equivalency fee would apply to imports of carbon-pollution-intensive goods	Directs EPA to submit report to Congress describing fugitive methane emissions related to leaks in natural gas infrastructure and recommending ways to address these leaks; directs EPA to enter agreement with the National Academy of Sciences to study GHG emissions from non-covered sources and make recommendations for reducing these emissions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				Projects Agency-Energy Any remaining funds in the trust fund are applied to deficit reduction **Revenues from the carbon equivalency fee on imports:** 50% to EPA to distribute to state/local programs for adaptation, infrastructure improvement, and environmental protection 50% to the Department of Transportation to support state/local critical infrastructure and transportation projects that reduce vehicular traffic			
S. 2940 Whitehouse Nov. 19, 2014	Fee on fossil fuels based on their carbon	Fee applies to coal at mines, petroleum at refineries, natural gas at processors, imported	Fee continues until national GHG emissions are	Fee revenue used to create the American Opportunity Fund, appropriations from	No specific provisions	Imports of carbon-intensive goods subject to a fee—	Separate fee for non-CO_2 GHG emissions at facilities that (1) are subject to GHG

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	content and certain facilities Fee set at $42/mtCO_2$ emissions in 2015, increasing by 2% plus inflation each year	fossil fuels, and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of CO_2 annually	80% below 2005 levels	the fund could support the following (percentages not specified): income assistance to low-income households facing disproportionate energy costs tax cut offsets Social Security benefit increases tuition assistance-infrastructure improvements dividends to individuals and families transition assistance to workers in energy-intensive industries climate mitigation and adaptation national debt reduction		determined by the Secretary of the Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price and (2) the comparable costs (e.g., GHG fees) imposed by the nation exporting the material Exporters of carbon-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 $mtCO_2e$ (not including CO_2 emissions) Additional fee for methane emissions from fossil fuel extraction, distribution, and combustion

Source: Prepared by CRS.

Table 7. GHG Emission Reduction Proposals: 114th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 972 McDermott Feb. 13, 2015	Hybrid cap/tax approach on GHG emissions: covered entities purchase permits from the Department of the Treasury for expected emissions associated with fossil fuel use Permits cannot be sold or traded Price floor and price ceiling, ranging between $18.75 and $31.25 in 2017, increasing each year	Coal producers, petroleum refineries, first seller of natural gas, producers and importers of GHG emission substances	Average emissions between 2016 and 2020 equal to 90% of GHG emissions in 2005 by 2020	100% of the permit revenue is used to send monthly dividend payments to taxpayers	No specific provision	Unless an exporting nation has implemented equivalent measures, imports of carbon-intensive goods will be subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the costs domestic producers of comparable products incur due to the carbon price Exporters of carbon-intensive goods may receive a payment related to the increased costs of inputs (i.e., fossil fuels)	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
						subject to the fee	
H.R. 2202 Delaney May 1, 2015	Imposes an excise tax on GHG emissions Tax starts at $30/mtCO_2e$, increasing each year by 4% plus inflation	Tax applies to GHG emissions associated with fossil fuel combustion and GHG emissions from facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually Directs the Treasury Secretary to apply the tax at natural "chokepoints" in the supply chain in a way that maximizes the coverage of the tax on sources of emission while minimizing the burden on administration and compliance	No specific provisions	Distributes monthly energy refund payments to households based on the household's gross income level; households with incomes up to 200% above poverty line are eligible, but higher-income households may receive scaled refunds under certain conditions; payments are based on estimates (calculated by the Energy Information Administration) of loss of purchasing power due to the carbon tax During the first 10 years of the tax, 2% of the revenues may be used to provide assistance to workers in the coal	A tax refund is provided for GHG emissions that are captured and permanently sequestered	The Secretary of the Treasury may impose an equivalency fee on the person importing a good that would have had an increased cost (imposed by the carbon tax) if the good were produced in the United States Exporters of carbon-intensive goods may receive compensation for losses related to the tax system	No specific provision

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				industry displaced by the act Although not explicitly tied to the GHG tax revenue, the bill would gradually reduce the highest tax rate on corporate income from 35% to 28%			
S. 1548 Whitehouse June 10, 2015	Fee on fossil fuels based on their carbon content and on certain facilities for GHG emissions	Fee applies to coal at mines, petroleum at refineries, natural gas at processors, imported fossil fuels, and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs	Fee continues until national GHG emissions are 80% below 2005 levels	The bill reduces the highest tax rate on corporate income from 35% to 29%, provides an annual tax credit for each individual, provides an equivalent benefit to individuals not eligible for the tax credit, provides up to $20 billion in annual cost-mitigation grants to states to be used to assist low-income and rural households with energy costs and support job training and worker assistance programs	No specific provisions	Imports of carbon-intensive goods subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price, and (2) the comparable costs (e.g., GHG fees) imposed by the nation	Separate fee for fluorinated GHGs Separate fee for GHGs (other than CO_2 and fluorinated gas emissions) set at $45/mt$CO_2$e in 2016, increasing by 2% plus inflation each year Additional fee for methane emissions from fossil fuel extraction, distribution, and combustion (as determined by Secretary of the Treasury)

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
						exporting the material Exporters of energy-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	
S. 2399 Sanders Dec. 10, 2015	Fee on fossil fuels based on carbon content Fee starts at $15 $mtCO_2e$, increasing annually by $2 to $4, until reaching $73 in 2035; increasing thereafter by 5% plus inflation	A carbon content fee is imposed on manufacturers, producers, or importers of a carbon polluting substance, which includes fossil fuels; carbon content determined by the Secretary of the Treasury	Target of 5.8 billion metric tons in 2020, which is equivalent to 20% below 2005 CO_2 emissions from fossil fuel combustion	Distributes collected revenue from fees in equal quarterly rebates to each citizen or permanent resident; Secretary of the Treasury to issue regulations implementing rebate system; the rebates are phased out and eliminated for households earning over $100,000/year (with annual inflation adjustments); fees from imported materials would be	No specific provisions	A carbon equivalency fee would apply to imports of carbon-pollution-intensive goods, as determined by the Secretary of the Treasury	Establishes the Interagency Climate Council to monitor GHG emission progress and issue regulations to help meet reduction targets; creates a grant program to promote no-till farming practices and a nitrogen uptake pilot program

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				used to support other objectives, including energy efficiency			
H.R. 4283 McNerney Dec. 17, 2015	Tax on fossil fuels based on their carbon content "of the life cycle emissions" Tax starts in 2016 at $15 per metric ton of CO_2 emissions; tax rate increases annually by $10/ton; if emission targets are met, tax ceases to apply for four years; tax reapplies if subsequent targets not met	Tax imposed on producers, miners, or importers of fossil fuels	Tax ceases if life-cycle emissions from fossil fuels reach 50% below 2005 levels (as determined by the Secretary of the Treasury in consultation with EPA)	Tax revenue used to provide quarterly dividends to every person with a Social Security number	No specific provisions	Imports of goods containing or produced using fossil fuels subject to a carbon equivalency fee—determined by the Secretary of the Treasury—that is equal to the cost that U.S. producers of a comparable good incur as a result of the U.S. carbon tax; this fee expires if the exporting nation implements equivalent measures or if an international agreement requires equivalent measures	No specific provisions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
						Exporters of fossil fuels or materials that used fossil fuels during production or manufacture may receive a tax refund related to the increased costs of inputs (i.e., fossil fuels) subject to the carbon tax	

Source: Prepared by CRS.

Table 8. GHG Emission Reduction Proposals: 115th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 2014 Delaney Apr. 6, 2017	Imposes an excise tax on GHG emissions Tax starts at $30/metric ton of CO_2e, increasing each year by 4% plus inflation	Tax applies to GHG emissions associated with fossil fuel combustion and GHG emissions from persons who (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually Directs the Treasury Secretary to apply the tax at natural chokepoints in the supply chain in a way that maximizes the coverage of the tax on sources of emission while minimizing the burden on administration and compliance	No specific provisions	Distributes monthly energy refund payments to households, based on the household's gross income level; households with incomes up to 200% above poverty line are eligible, but higher-income households may receive scaled refunds under certain conditions; payments are based on estimates (calculated by the Energy Information Administration) of loss of purchasing power due to the carbon tax During the first 10 years of the tax, 2% of the revenues may be used to provide assistance to workers in the coal industry displaced by the act Although not explicitly tied to the GHG tax revenue, the bill would gradually reduce the highest tax rate on corporate income from 35% to 28%	A tax refund is provided for GHG emissions that are captured and permanently sequestered	The Secretary of the Treasury may impose an equivalency fee on the person importing a good that would have had an increased cost (imposed by the carbon tax) if the good is produced in the United States Exporters of carbon-intensive goods may receive compensation for losses related to the tax system	
S. 1639 Whitehouse July 26, 2017	Fee on fossil fuels based on their carbon content and certain	Fee applies to coal at mines, petroleum at refineries, natural gas at processors, imported fossil fuels,	Fee continues until national GHG emissions	The bill reduces the highest tax rate on corporate income from 35% to 29%, provides an annual tax credit for each individual, provides an equivalent benefit to individuals	No specific provisions	Imports of carbon-intensive goods subject to a fee—determined by the Secretary of the	Separate fee for fluorinated GHGs

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	facilities for GHG emissions Fee set at $49/ton CO_2 emissions in 2018, increasing by 2% plus inflation each year	and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually	are 80% below 2005 levels	not eligible for the tax credit, provides up to $20 billion in annual cost-mitigation grants to states to be used to assist low-income and rural households with energy costs and support job training and worker assistance programs		Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price, and (2) the comparable costs (e.g., GHG fees) imposed by the nation exporting the material Exporters of energy-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	Fee for facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 $mtCO_2e$ emissions (other than CO_2 or fluorinated GHGs) Additional fee for GHG emissions resulting from venting, flaring, and leaking across the coal, natural gas, and petroleum supply chains (as determined by Secretary of the Treasury)
H.R. 3420 Blumenauer July 26, 2017	Fee on fossil fuels based on their carbon content and certain	Fee applies to coal at mines, petroleum at refineries, natural gas at processors,	Fee continues until national GHG emissions	The bill reduces the highest tax rate on corporate income from 35% to 29%, provides an annual tax credit for each individual, provides	No specific provisions	Imports of carbon-intensive goods subject to a fee—determined by the	Separate fee for fluorinated GHGs

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	facilities for GHG emissions Fee set at \$49/ton CO_2 emissions in 2018, increasing by 2% plus inflation each year	imported fossil fuels, and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually	are 80% below 2005 levels	an equivalent benefit to individuals not eligible for the tax credit, provides up to \$20 billion in annual cost-mitigation grants to states to be used to assist low-income and rural households with energy costs and support job training and worker assistance programs		Secretary of the Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price and (2) the comparable costs (e.g., GHG fees) imposed by the nation exporting the material Exporters of energy-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	Fee for facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 $mtCO_2e$ (other than CO_2 or fluorinated GHGs) Additional fee for GHG emissions resulting from venting, flaring, and leaking across the coal, natural gas, and petroleum supply chains (as determined by Secretary of the Treasury)
H.R. 4209 Larson Nov. 1, 2017	Tax on fossil fuels based on their carbon content Tax set at \$49/$mtCO_2$ in	Tax applies to manufacturers, producers, or importers of coal, petroleum, and natural gas	No specific provision	Establishes a trust fund that would receive appropriations equal to tax revenue received in the Treasury; the trust fund would provide annual funding for the following infrastructure programs:	No specific provisions	The Secretary of the Treasury shall impose a fee on imports of carbon-intensive goods; the fee will be	No specific provisions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	2019, increasing by 2% plus inflation each year			$50 billion (plus the Highway Trust Fund shortfall) for highway (80%) and mass transit (20%); $5 billion for the Transportation Investments Generating Economic Recovery program; $3 billion for aviation; $5 billion for passenger rail; $6 billion for harbors, waterways, flood protection, and dams; $6 billion for wastewater and drinking water; and $3 billion for broadband In addition, the trust fund provides: $5 billion annually for worker transition assistance in the fossil fuel industries; and 12.5% for an energy refund program that would provide monthly payments to households with incomes up to 150% of poverty line Any remaining revenues supports a consumer tax rebate for households with incomes up to 350% of the poverty line		equivalent to the cost that domestic producers incur due to the carbon tax; this fee expires if the exporting nation implements equivalent measures or if an international agreement requires equivalent measures	
S. 2352 Van Hollen Jan. 29, 2018	Cap-and-trade system for CO_2 emissions from fossil fuel combustion	Covered materials include crude oil, coal, natural gas, and products derived from	2020 limit: permits sold equal to 20% below 2005	Auction revenue distributed via quarterly dividend payments to all persons with a valid Social Security number	No specific provisions	Unless an exporting nation has implemented equivalent measures, imports	EPA directed to promulgate regulations to address other GHG

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	Permits sold through quarterly auctions by the Department of the Treasury Auction revenue distributed to individuals, often described as a "cap and dividend" approach A permit reserve and borrowed permits from future years may be used to help stabilize auction prices	these materials used for combustion Covered entities include petroleum refineries and importers, coal mines and importers, and natural gas deliverers (as reported on Energy Information Administration Form 176) and some natural gas processors	2025 limit: permits sold equal to 30% below 2005 U.S. CO_2 emissions 2030 limit: permits sold equal to 40% below 2005 U.S. CO_2 emissions 2040 limit: permits sold equal to 60% below 2005 U.S. CO_2 emissions			of carbon-intensive goods will be subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the costs domestic producers of comparable products incur due to the carbon price Exporters of carbon-intensive goods may receive compensation for losses related to the permit system	emissions that are not covered by the permit program; emissions "directly attributable to the production of animals for food or food products" are excluded
H.R. 4889 Beyer Jan. 29, 2018	Cap-and-trade system for CO_2 emissions from fossil fuel combustion Permits sold through quarterly auctions by the Department of the Treasury	Covered materials include crude oil, coal, natural gas, and products derived from these materials used for combustion Covered entities include petroleum refineries and importers, coal mines and importers, and natural gas deliverers	2020 target: reduce U.S. CO_2 emissions to 20% below 2005 levels 2030 target: 40% below 2005 levels	Auction revenue distributed via quarterly dividend payments to all persons with a valid Social Security number	No specific provisions	Unless an exporting nation has implemented equivalent measures, imports of carbon-intensive goods will be subject to a fee—determined by the Secretary of the Treasury—that is equivalent	EPA directed to promulgate regulations to address other GHG emissions that are not covered by the permit program; emissions "directly

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	Auction revenue distributed to individuals, often described as a "cap and dividend" approach A permit reserve and borrowed permits from future years may be used to help stabilize auction prices	(as reported on Energy Information Administration Form 176) and some natural gas processors				to the costs domestic producers of comparable products incur due to the carbon price Exporters of carbon-intensive goods may receive compensation for losses related to the permit system	attributable to the production of animals for food or food products" are excluded
S. 2368 Whitehouse Feb. 5, 2018	Fee on fossil fuels based on their carbon content and certain facilities for GHG emissions Fee set at \$50/ton CO_2 emissions in 2019, increasing by 2% plus inflation each year	Fee applies to coal at mines, petroleum at refineries, natural gas at processors, imported fossil fuels, and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually	Fee continues until national GHG emissions are 80% below 2005 levels	The bill provides an annual tax credit for each individual, provides an equivalent benefit to individuals not eligible for the tax credit, provides up to \$10 billion in annual cost-mitigation grants to states to be used to assist low-income and rural households with energy costs and support job training and worker assistance programs; this amount increases annually	No specific provisions	Imports of carbon-intensive goods subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price and (2) the comparable costs (e.g., GHG fees) imposed by the	Separate fee for fluorinated GHGs Separate fee for GHGs (other than CO_2 and fluorinated gas emissions) at facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
						nation exporting the material Exporters of energy-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	$mtCO_2e$ emissions Additional fee for GHG emissions resulting from venting, flaring, and leaking across the coal, natural gas, and petroleum supply chains (as determined by Secretary of the Treasury)
H.R. 4926 Blumenauer Feb. 5, 2018	Fee on fossil fuels based on their carbon content and certain facilities for GHG emissions Fee set at \$50/ton CO_2 emissions in 2019, increasing by 2% plus inflation each year	Fee applies to coal at mines, petroleum at refineries, natural gas at processors, imported fossil fuels, and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually	Fee continues until national GHG emissions are 80% below 2005 levels	The bill provides an annual tax credit for each individual, provides an equivalent benefit to individuals not eligible for the tax credit, provides up to \$10 billion in annual cost-mitigation grants to states to be used to assist low-income and rural households with energy costs and support job training and worker assistance programs; this amount increases annually	No specific provisions	Imports of carbon-intensive goods subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price and (2) the comparable costs (e.g., GHG fees) imposed by the	Separate fee for fluorinated GHGs Separate fee for GHGs (other than CO_2 and fluorinated gas emissions) at facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
						nation exporting the material Exporters of energy-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	25,000 $mtCO_2e$ Additional fee for GHG emissions resulting from venting, flaring, and leaking across the coal, natural gas, and petroleum supply chains (as determined by Secretary of the Treasury)
H.R. 6463 Curbelo July 23, 2018	Tax on fossil fuels based on their carbon content and on emissions from specific facilities and sources Tax starts at $24/metric ton of CO_2e, increasing by 2% plus inflation each year	Tax applies to coal at mines, petroleum at refineries, natural gas at processors, imported fossil fuels, facilities in specified industrial sectors that emit more than 25,000 metric tons of CO_2e annually, facilities that manufacture or import specified products, and facilities that combust biomass with emissions above 25,000 metric tons of CO_2e	No specific provision Authorizes the Secretary of the Treasury to increase the tax rate if annual, cumulative emission reduction targets are not met (e.g., 5,177 million metric tons CO_2e in 2020)	Establishes a trust fund that receives appropriations equal to 75% of tax revenue deposited in the Treasury; from this amount, the trust fund provides annual funding for the following objectives ("as provided in appropriations acts") between FY2021 and FY2030: 70% to the Federal Highway Trust Fund; 10% to the states as grants to low-income households; 5.0% for frequent and chronic coastal flooding mitigation and adaptation infrastructure projects;	No specific provisions	Imports of carbon-intensive goods subject to a border tax—determined by the Secretary of the Treasury—that is equivalent to the costs in comparable domestic manufactured goods (associated with the carbon tax) Exporters of energy-intensive	Establishes a conditional moratorium on Clean Air Act GHG regulations for stationary emissions sources (with some exceptions) Creates a National Climate Commission to set five-year emission

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				3.0% for displaced energy workers; 2.7% for various energy-related research and development objectives (e.g., carbon capture and storage); 3.0% to support agricultural GHG sequestration projects; 2.5% for the Airport and Airway Trust Fund; 2.0% for the Abandoned Mine Reclamation Fund; 1.5% for the Department of Energy weatherization program; 0.1% for the Leaking Underground Storage Tank trust fund; 0.1% for the Reforestation Trust Fund; 0.1% to decrease the environmental impact of renewable energy activities pursuant to Section 931 of the Energy Policy Act of 2005		goods may receive a tax refund related to the increased costs of inputs (i.e., fossil fuels) subject to the tax	reduction goals between 2025 and 2050 and assess the effectiveness of federal policies in meeting these goals
H.R. 6928 McNerney Sept. 27, 2018	Tax on fossil fuels based on their carbon content "of the life cycle emissions" Tax starts in 2020 at $25 per	Tax imposed on producers, miners, or importers of fossil fuels	Tax ceases if emission targets are met; targets based on life-cycle emission reductions (as determined by EPA) from fossil	Establishes a trust fund that receives appropriations equal to carbon tax revenues received in the Treasury Subject to the appropriations process, tax revenue used to offset a corresponding reduction in individual income tax rates starting	No specific provisions	Imports of goods containing or produced using fossil fuels subject to a carbon equivalency fee—determined by the Secretary of the	No specific provisions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	metric ton of CO_2 emissions; tax rate increases annually by $10/ton; if emission targets are met, tax ceases to apply for four years; tax reapplies if subsequent targets not met		fuels below 2005 levels: 2025: 30% 2030: 40% 2035: 50% 2040: 70% 2050: 80%	in 2019; remaining revenues would be allocated as follows: 80% used to provide quarterly dividends to every person with a Social Security number 20% used to support a range of objectives, including: -worker transition assistance -rural energy assistance -technology-neutral research and development -electric grid innovation -infrastructure resilience -energy efficiency and conservation		Treasury—that is equal to the cost that U.S. producers of a comparable good incur as a result of the U.S. carbon tax; this fee expires if the exporting nation implements equivalent measures or if an international agreement requires equivalent measures Exporters of fossil fuels or materials that used fossil fuels during production or manufacture may receive a tax refund related to the increased costs of inputs (i.e., fossil fuels) subject to the carbon tax	

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 7173 Deutch Nov. 27, 2018	Fee on fossil fuels based on their GHG content Fee set at \$15/mtCO_2e emissions in 2019, increasing by \$10 each year If emission reduction targets are not met, fee increases by \$15; if targets met, fee does not increase Provides a rebate for fuels used on a farm	Covered entities include petroleum refineries and importers, coal mines and importers, natural gas deliverers, and some natural gas processors	Emission reduction targets apply to fossil fuel combustion emissions; starting in 2022, annual reductions of 5% of 2015 levels (253 million mtCO_2e) between 2022 and 2029; less stringent reductions in subsequent years	Establishes a trust fund that receives appropriations equal to emission fee revenues received in the Treasury; monies in the trust fund are available (after administrative expenses) to provide monthly payments to eligible individuals (i.e., persons with a Social Security number or taxpayer identification number); adults get one share and children receive a half-share	No specific provisions	Imports of carbon-intensive products subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the excess of (1) GHG emissions from production multiplied by the relevant U.S. emissions fee over (2) the total foreign product cost of carbon; Exporters of carbon-intensive products (and covered fuels) may receive a refund under an analogous formula	Separate fee for fluorinated GHGs set at 10% of fee for fossil fuel emissions Suspends enforcement of certain Clean Air Act GHG regulations; if EPA determines (in 2030 and every five years thereafter) emission targets are not met, the enforcement suspension would cease and EPA must promulgate regulations to reduce emissions from covered fuels
S. 3791 Coons Dec. 19, 2018	Fee on fossil fuels based on their GHG content	Covered entities include petroleum refineries and importers, coal mines	Emission reduction targets apply to fossil fuel	Establishes a trust fund that receives appropriations equal to emission fee revenues received in the Treasury; monies in the trust	No specific provisions	Imports of carbon-intensive products subject to a fee—determined by the	Separate fee for fluorinated GHGs set at 10% of fee for

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	Fee set at $15/mtCO_2e$ emissions in 2019, increasing by $10 each year If emission reduction targets are not met, fee increases by $15; if targets met, fee does not increase Provides a rebate for fuels used on a farm	and importers, natural gas deliverers, and some natural gas processors	combustion emissions; starting in 2022, annual reductions of 5% of 2015 levels (253 million $mtCO_2e$) between 2022 and 2029; this equates to a 50% reduction in 2030 compared to 2005 levels; less stringent reductions in subsequent years	fund are available (after administrative expenses) to provide monthly payments to eligible individuals (i.e., persons with a Social Security number or taxpayer identification number); adults get one share and children receive a half-share		Secretary of the Treasury—that is equivalent to the excess of(1) GHG emissions from production multiplied by the relevant U.S. emissions fee over (2) the total foreign product cost; Exporters of carbon-intensive products (and covered fuels) may receive a refund under an analogous formula	fossil fuel emissions Directs EPA to evaluate effectiveness of fee program in meeting emission reduction targets; if targets are met, EPA may review existing regulations on fossil fuel combustion and fluorinated GHG emissions

Source: Prepared by CRS.

Table 9. GHG Emission Reduction Proposals: 116th Congress

Ordered Chronologically by Introduced Date

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 763 Deutch Jan. 24, 2019	Fee on fossil fuels based on their GHG content Fee set at \$15/mtCO_2e emissions in 2019, increasing by \$10 each year plus inflation If emission reduction targets are not met, fee increases by \$15 plus inflation; if targets met, fee does not increase Provides a rebate for fuels used on a farm and for fuels or their derivatives used by U.S. Armed Forces	Covered entities include petroleum refineries and importers, coal mines and importers, natural gas deliverers, and some natural gas processors	Emission reduction targets apply to fossil fuel combustion emissions; starting in 2025, annual reductions of 5% of 2016 levels (248 million mtCO_2e) between 2025 and 2034; annual reductions of 2.5% of 2016 levels between 2035 and 2050 Fee ceases if emissions from covered fuels decrease to 10% of 2016 levels (497 million mtCO_2e) and monthly dividend check reach certain levels	Establishes a trust fund that receives appropriations equal to emission fee revenues received in the Treasury; monies in the trust fund are available (after administrative expenses) to provide monthly payments to eligible individuals (i.e., persons with a Social Security number or taxpayer identification number); adults get one share and children receive a half-share	No specific provisions	Imports of carbon-intensive products subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the excess of (1) GHG emissions from production multiplied by the relevant U.S. emissions fee over (2) the total foreign product cost of carbon Exporters of carbon-intensive products (and covered fuels) may receive a refund under an analogous formula	Separate fee for fluorinated GHGs set at 10% of fee for fossil fuel emissions Suspends enforcement of certain Clean Air Act GHG regulations; if EPA determines (in 2030 and every five years thereafter) emission targets are not met, the enforcement suspension would cease and EPA must promulgate regulations to reduce emissions from covered fuels
S. 940 Van Hollen Mar. 28, 2019	Cap-and-trade system for CO_2 emissions from	Covered materials include crude oil, coal, natural gas, and products	2020 limit: permits sold equal to 12.5% below 2005 U.S. CO_2 emissions	Auction revenue distributed via quarterly dividend payments to all persons with a valid Social Security number	No specific provisions	Unless an exporting nation has implemented equivalent	EPA directed to promulgate regulations to address other GHG

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
This proposal is identical to H.R. 1960 *(Beyer)*	fossil fuel combustion Permits sold through quarterly auctions by the Department of the Treasury Auction revenue distributed to individuals, often described as a "cap and dividend" approach A permit reserve and borrowed permits from future years may be used to help stabilize auction prices	derived from these materials used for combustion Covered entities include petroleum refineries and importers, coal mines and importers, and natural gas deliverers (as reported on Energy Information Administration Form 176) and some natural gas processors	2025 limit: permits sold equal to 30% below 2005 U.S. CO_2 emissions 2030 limit: permits sold equal to 50% below 2005 U.S. CO_2 emissions 2040 limit: permits sold equal to 80% below 2005 U.S. CO_2 emissions			measures, imports of carbon-intensive goods will be subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the costs domestic producers of comparable products incur due to the carbon price Exporters of carbon-intensive goods may receive compensation for losses related to the permit system	emissions that are not covered by the permit program; emissions "directly attributable to the production of animals for food or food products" are excluded
H.R. 1960 Beyer Mar. 28, 2019 *This proposal is identical to* S. 940 *(Van Hollen)*	Cap-and-trade system for CO_2 emissions from fossil fuel combustion Permits sold through quarterly auctions by the	Covered materials include crude oil, coal, natural gas, and products derived from these materials used for combustion Covered entities include petroleum refineries and	2020 limit: permits sold equal to 12.5% below 2005 U.S. CO_2 emissions 2025 limit: permits sold equal to 30% below 2005 U.S. CO_2 emissions 2030 limit: permits sold equal to 50%	Auction revenue distributed via quarterly dividend payments to all persons with a valid Social Security number	No specific provisions	Unless an exporting nation has implemented equivalent measures, imports of carbon-intensive goods will be subject to a fee—determined by the Secretary of the	EPA directed to promulgate regulations to address other GHG emissions that are not covered by the permit program; emissions "directly attributable to the production of animals

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	Department of the Treasury Auction revenue distributed to individuals, often described as a "cap and dividend" approach A permit reserve and borrowed permits from future years may be used to help stabilize auction prices	importers, coal mines and importers, and natural gas deliverers (as reported on Energy Information Administration Form 176) and some natural gas processors	below 2005 U.S. CO_2 emissions 2040 limit: permits sold equal to 80% below 2005 U.S. CO_2 emissions			Treasury—that is equivalent to the costs domestic producers of comparable products incur due to the carbon price Exporters of carbon-intensive goods may receive compensation for losses related to the permit system	for food or food products" are excluded
S. 1128 Whitehouse Apr. 10, 2019	Fee on fossil fuels based on their carbon content and certain facilities for GHG emissions Fee set at \$52/ton CO_2 emissions in 2020, increasing by 6% plus inflation each year	Fee applies to coal at mines, petroleum at refineries, natural gas at processors, imported fossil fuels, and facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 tons of GHGs annually Fee also applies to certain industrial sources, regardless	Fee continues until national GHG emissions are 80% below 2005 levels	The bill provides an annual tax credit for each individual; provides an equivalent benefit to individuals not eligible for the tax credit Provides up to \$10 billion in annual grants to states to be used to (1) assist low-income and rural households with energy costs, (2) support job training and worker assistance programs, and (3) assist the state in climate change adaptation or transition	No specific provisions	Imports of carbon-intensive goods subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the carbon price and (2) the comparable costs (e.g., GHG fees) imposed by the	Separate fee for fluorinated GHGs Separate fee for GHGs (other than CO_2 and fluorinated gas emissions) at facilities that (1) are subject to GHG reporting requirements in 40 C.F.R. Part 98 and (2) emit more than 25,000 mtCO_2e emissions Additional fee for GHG emissions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
		of their emissions output, including aluminum production, HCFC-22 production and HFC-23 destruction, and fluorinated gas production; this fee starts as a percentage of the fossil fuel fee and increases annually		to a low-carbon economy; this amount increases annually		nation exporting the material Exporters of energy-intensive goods may receive a refund related to the increased costs of inputs (i.e., fossil fuels) subject to the fee	(described as "associated emissions") resulting from venting, flaring, and leaking across the coal, natural gas, and petroleum supply chains (as determined by Secretary of the Treasury)
S. 2284 Coons July 25, 2019 *This proposal is identical to* H.R. 4051 *(Panetta)*	Fee on fossil fuels based on their GHG content Fee on solid biomass based on GHG content as determined by EPA, using a life-cycle analysis Fee set at $\$15/mtCO_2e$ emissions in 2020, increasing by $15 each year If emission reduction targets are not met, fee increases by $30; if annual targets	Covered entities include petroleum refineries and importers, coal mines and importers, natural gas wells and importers, solid biomass combustion facilities	Emission reduction targets apply to emissions from covered fuels; starting in 2020, target equals 90% of 2017 levels, reaching 59% of 2017 levels in 2025 and 45% of 2017 levels in 2030; in subsequent years, the targets are reduced by 2.25% of 2017 emission levels each year Fee ceases if emissions from covered fuels equal 10% of 2017 emission levels	Establishes a trust fund that receives appropriations equal to emission fee revenues collected in the Treasury; monies in the trust fund (after administrative expenses) are allocated as follows: 70% to provide monthly payments to eligible individuals (i.e., persons with a Social Security number or taxpayer identification number); adults get one share and children receive a half-share; payments are phased-out at certain income levels 20% to support existing and new infrastructure funding programs and other objectives	Directs the Department of Agriculture (in consultation with EPA) to provide payments for farmers and landowners for eligible sequestration activities; directs Department of Energy to provide payments for direct air capture of CO_2 emissions; the funding source for these payments is not specified	Imports of carbon-intensive products subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the excess of (1) GHG emissions from production multiplied by the relevant U.S. emissions fee over (2) the total foreign product cost Exporters of carbon-intensive products (and covered fuels) may receive a refund	Separate fee for fluorinated GHGs set at 20% of fee for fossil fuel emissions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	met, fee does not increase Fee collected quarterly			5% to the Department of Energy to support development of GHG mitigation technology and related technologies 5% to support transition assistance through new and existing programs		under an analogous formula	
H.R. 4051 Panetta July 25, 2019 *This proposal is identical to* S. 2284 *(Coons)*	Fee on fossil fuels based on their GHG content Fee on solid biomass based on GHG content as determined by EPA using a life-cycle analysis Fee set at \$15/mtCO_2e emissions in 2020, increasing by \$15 each year If emission reduction targets are not met, fee increases by \$30; if annual targets met, fee does not increase	Covered entities include petroleum refineries and importers, coal mines and importers, natural gas wells and importers, solid biomass combustion facilities	Emission reduction targets apply to emissions from covered fuels; starting in 2020, target equals 90% of 2017 levels, reaching 59% of 2017 levels in 2025 and 45% of 2017 levels in 2030; in subsequent years, the targets are reduced by 2.25% of 2017 emission levels each year Fee ceases if emissions from covered fuels equal 10% of 2017 emission levels	Establishes a trust fund that receives appropriations equal to emission fee revenues collected in the Treasury; monies in the trust fund (after administrative expenses) are allocated as follows: 70% to provide monthly payments to eligible individuals (i.e., persons with a Social Security number or taxpayer identification number); adults get one share and children receive a half-share; payments are phased-out at certain income levels 20% to support existing and new infrastructure funding programs and other objectives 5% to the Department of Energy to support development of GHG mitigation technology and related technologies	Directs the Department of Agriculture (in consultation with EPA) to provide payments for farmers and landowners for eligible sequestration activities; directs Department of Energy to provide payments for direct air capture of CO_2 emissions; the funding source for these payments is not specified	Imports of carbon-intensive products subject to a fee—determined by the Secretary of the Treasury—that is equivalent to the excess of (1) GHG emissions from production multiplied by the relevant U.S. emissions fee over (2) the total foreign product cost Exporters of carbon-intensive products (and covered fuels) may receive a refund under an analogous formula	Separate fee for fluorinated GHGs set at 20% of fee for fossil fuel emissions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	Fee collected quarterly			5% to support transition assistance through new and existing programs			
H.R. 3966 Lipinski July 25, 2019	Tax on fossil fuels based on their potential CO_2 emissions; tax rate set in 2020 at $40/short ton of CO_2, increasing annually by 2.5% plus inflation; if GHG emissions target is met, the rate increases only by inflation	Tax imposed on manufacturers, producers, and importers of fossil fuels at first point of sale	GHG emissions target of 80% below 2005 levels	Net revenues from the tax on fossil fuels, imported products, and fluorinated GHGs support the following objectives: 10% used to increase monthly payments to Social Security beneficiaries 5% allocated to the Low-Income Home Energy Assistance program 1% allocated to the Department of Energy's weatherization assistance program After these allocations, remaining revenues used to reduce the payroll tax rates that apply to employees and the self-employed	No specific provisions	Tax applies to specific imported products based on the lesser of the fossil fuels used during production or the CO_2 emissions attributable to their production; eligible products based on a list of domestic industries (prepared by EPA) that, "in the aggregate, account for 95% of the taxable carbon substances used in the United States" Exporters may receive a refund for fossil fuels and any other product with increased costs attributable to the new tax	Separate tax for fluorinated GHGs (based on metric tons of CO_2e) set at 10% of the tax rate for fossil fuel emissions Suspends enforcement of certain Clean Air Act GHG regulations; if EPA determines (in 2030 and every five years thereafter) that emission targets are not met, the enforcement suspension would cease and EPA must promulgate regulations to reduce emissions from covered fuels

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 4058 Rooney July 25, 2019	Tax on fossil fuels based on their potential GHG emissions, GHG emissions from specific industrial sources, and GHG emissions from specific products Tax rate set in 2021 at $30/mtCO2e, increasing annually by 5% plus inflation; if covered emissions do not meet emission reduction schedule, the tax rate increases by an additional $3	Tax imposed on coal at coal mines and importers, petroleum products at refineries and importers, and natural gas at processors or at point of sale for combustion Tax imposed on facilities—in specific industrial source categories—that emit more than 25,000 mtCO2e per year Tax imposed on facilities that manufacture or import specified products or combust biomass with emissions above 25,000 mtCO2e	Emission reduction schedule for covered emissions starts in 2021 at 5,000 mmtCO2e; the annual emission schedule is cumulative, reaching 49,000 mmtCO2e in 2031; assuming annual emission levels followed this decreasing schedule, covered emissions would decrease to 4,200 mmtCO2e in 2031	Tax revenue supports the following objectives: 52.5% to offset a reduction in payroll tax rates that apply to employees, employers, and self-employed persons 7.5% to provide a payment to Social Security beneficiaries 7.5% to provide block grants to states to offset higher energy costs for low-income households 7.5% to support climate adaptation, carbon sequestration, energy efficiency, and research and development programs	No specific provisions	Imports of carbon-intensive goods subject to a border tax—determined by the Secretary of the Treasury—that is equivalent to the costs in comparable domestic manufactured goods (associated with the carbon tax) Exporters of energy-intensive goods may receive a tax refund related to the increased costs of inputs (i.e., fossil fuels) subject to the tax	Establishes a conditional moratorium on Clean Air Act GHG regulations for stationary emissions sources (with some exceptions) Creates a credit system, which phases out after five years, for persons making payments under existing state GHG reduction programs
H.R. 4142 Larson Aug. 2, 2019	Tax on fossil fuels based on their carbon content Tax set at $52/mtCO2 in	Tax applies to manufacturers, producers, or importers of coal, petroleum, and natural gas	No specific provisions	Establishes a trust fund that would receive appropriations equal to tax revenue received in the Treasury; the trust fund would provide annual funding	No specific provisions	The Secretary of the Treasury shall impose a fee on imports of carbon-intensive goods; the fee will be	No specific provisions

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	2020, increasing by 6% plus inflation each year			for the following infrastructure programs: $61 billion (plus the Highway Trust Fund shortfall) for highway (80%) and mass transit (20%); $6.4 billion for the Transportation Investments Generating Economic Recovery program; $4 billion for aviation; $6.6 billion for passenger rail; $8 billion for harbors, waterways, flood protection, and dams; $8.4 billion for wastewater and drinking water; $4 billion for broadband; $3 billion for education infrastructure; $1.5 billion for health care research and infrastructure; $2 billion for the Public Housing Capital Fund; $4.4 billion for Department of Energy research and development programs; and $1.5 billion for Department of Agriculture climate-related research		equivalent to the cost that domestic producers incur due to the carbon tax; this fee expires if the exporting nation implements equivalent measures or if an international agreement requires equivalent measures	

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
				In addition, the trust fund provides: $7 billion annually for worker and community transition assistance, and 12.5% for an energy refund program that would provide monthly payments to households with incomes up to 150% of poverty line Any remaining revenues support a consumer tax rebate for households with incomes up to 350% of the poverty line			
H.R. 4520 Fitzpatrick Sept. 26, 2019	Tax on fossil fuels based on their potential GHG emissions, GHG emissions from specific industrial sources, and GHG emissions from specific products Tax rate set in 2021 at \$35/mtCO_2e, increasing annually by 5% plus inflation; if covered	Tax imposed on coal at coal mines and importers, petroleum products at refineries and importers, and natural gas at processors or at point of sale for combustion Tax imposed on facilities—in specific industrial source categories—that emit more than 25,000 mtCO_2e per year	Emission reduction schedule for covered emissions starts in 2021 at 4,900 mmtCO_2e; the annual emission schedule is cumulative, reaching 48,800 mmtCO_2e in 2031; assuming annual emission levels followed this decreasing schedule, covered emissions would decrease to 4,000 mmtCO_2e in 2031	Establishes a trust fund that would receive appropriations equal to 75% of the tax revenue received in the Treasury; the trust fund would provide annual funding for the following infrastructure programs ("as provided in appropriations acts") between FY2021 and FY2030: 70% to the Federal Highway Trust Fund; 10% to the states as grants to allocate to low-income households; 4.2% for various energy-related research and	No specific provisions	Imports of carbon-intensive goods subject to a border tax—determined by the Secretary of the Treasury—that is equivalent to the costs in comparable domestic manufactured goods (associated with the carbon tax) Exporters of energy-intensive goods may receive a tax refund	Establishes a conditional moratorium on Clean Air Act GHG regulations for stationary emissions sources (with some exceptions) Creates a credit system, which phases out after five years, for persons making payments under existing state GHG reduction programs Creates a National Climate Commission to set five-year

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
	emissions do not meet emission reduction schedule, the tax rate increases by an additional $4	Tax imposed on facilities that manufacture or import specified products or combust biomass with emissions above 25,000 $mtCO_2e$		development objectives, including carbon capture and storage and battery technology; 4.0% for frequent and chronic coastal flooding mitigation and adaptation infrastructure projects; 3.0% for displaced energy workers; 2.5% for the Airport and Airway Trust Fund; 1.5% for the Department of Energy weatherization program; 1.5% for the Abandoned Mine Reclamation Fund; 1.0% for the Reforestation Trust Fund; 0.5% to support agricultural GHG sequestration projects; 0.1% to decrease the environmental impact of renewable energy activities pursuant to Section 931 of the Energy Policy Act of 2005; 0.1% for the Leaking Underground Storage Tank trust fund		related to the increased costs of inputs (i.e., fossil fuels) subject to the tax	emission reduction goals between 2025 and 2050 and assess the effectiveness of federal policies in meeting these goals

Bill Number, Sponsor, Introduced Date, and Committee or Floor Action	General Framework	Covered Entities/Materials	Emissions Limit or Target	Distribution of Allowance Value or Tax/Fee Revenue	Offset and International Allowance Treatment	Mechanism to Address Carbon-Intensive Imports	Additional GHG Reduction Measures
H.R. 5457 Maloney Dec. 17, 2019	Tax on fossil fuels based on their carbon content Tax rate starts in 2020 at $40 per ton of carbon, which equates to approximately $11/tCO_2$ emissions; tax rate increases annually by a cost of living adjustment as defined in the bill	Tax imposed at coal mines and oil and gas wells and on fuels "entered into the United States"	No specific provision	Provides a $1,000 income tax credit for individuals and each of their dependents; tax credit phases out at adjusted gross income levels exceeding $314,000; tax credit and income phase-out level increases each year by a cost of living adjustment	No specific provisions	No specific provisions	No specific provisions
S. 4484 Durbin Aug. 6, 2020	Fee on fossil fuels and other selected GHG emission sources Fee on fossil fuels starts in 2022 at $25/mtCO_2e$, increasing annually by $10 plus inflation; if emission targets are not met, the fee increases are greater	Fee imposed on coal at coal mines and importers, crude oil at refineries and importers, and natural gas at producing wells and importers; and select sources that emit 25,000 $mtCO_2e$ or more of CO_2 or methane per year	Fee ceases if emission targets are met; targets based on percentage reductions compared to emission levels from covered fuels and sources in 2018: 2030: 47% below 2018 2035: 60% below 2018 2040: 70% below 2018 2045: 80% below 2018 2050: 90% below 2018	Establishes a trust fund that receives appropriations equal to emission fees received in the Treasury; after subtracting fee rebates and, in the first 18 years, approximately $5.5 billion per year, the remaining funds are allocated approximately as follows during the first 10 years: 70% for direct payments to eligible individuals, phasing out at certain income levels; 5% to support agricultural and forestry sequestration activities;	No specific provisions	Imports of carbon-intensive goods are subject to a fee (determined by the Secretary of the Treasury) that is equivalent to the difference in (1) costs domestic producers of comparable products incur due to the fee and (2) the comparable costs imposed by	Directs EPA to enter agreement with the National Academy of Sciences to study effects of fee program

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	Fee on other sources starts in 2024 Fee is delayed in 2022 and 2023 if unemployment rate is 5% or higher A rebate is provided for carbon capture, sequestration, and utilization activities			10% for grants to eligible entities to support transition assistance to a lower carbon economy; 15% for a newly established Climate Change Finance Corporation to finance "clean energy" and climate change resiliency activities, including research and development and commercialization of technologies		the exporting nation Exporters of fossil fuels and carbon intensive products may receive a rebate based on the emissions fee and manufacturing costs attributable to the emissions fee	
H.R. 8175 McNerney Sept. 4, 2020	Tax on fossil fuels based on the carbon content "of the life cycle emissions" Tax starts in 2021 at $25 per metric ton of CO_2 emissions; tax rate increases annually by $10/ton; if emission targets are met, tax ceases to apply for four years;	Tax imposed on producers, miners, or importers of fossil fuels	Tax ceases if emission targets are met; targets based on life-cycle emission percentage reductions (as determined by EPA) from fossil fuels below 2005 levels: 2025: 30% 2030: 40% 2035: 50% below 2040: 70% 2050: 80%	Establishes a trust fund that receives appropriations equal to carbon tax revenues received in the Treasury Tax revenue used to offset a corresponding reduction in individual income tax rates starting in 2021; remaining revenues would be allocated as follows: 80% used to provide quarterly dividends to every person with a Social Security number 20% used to support a range of objectives, including: -worker transition assistance -rural energy assistance -technology-neutral research	No specific provisions	Imports of goods containing or produced using fossil fuels subject to a carbon equivalency fee (determined by the Secretary of the Treasury) that is equal to the cost that U.S. producers of a comparable good incur as a result of the U.S. carbon tax; this fee expires if the exporting nation implements equivalent	No specific provisions

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	tax reapplies if subsequent targets not met			and development -electric grid innovation -infrastructure resilience -energy efficiency and conservation		measures or if an international agreement requires equivalent measures Exporters of fossil fuels or materials that used fossil fuels during production or manufacture may receive a tax refund related to the increased costs of inputs (i.e., fossil fuels) subject to the carbon tax	

Source: Prepared by CRS.

Author Information

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