

Summary of Market-Based Climate Change Bills Introduced in the 110th Congress

Draft as of October 31, 2008 (See companion figure for target levels.)

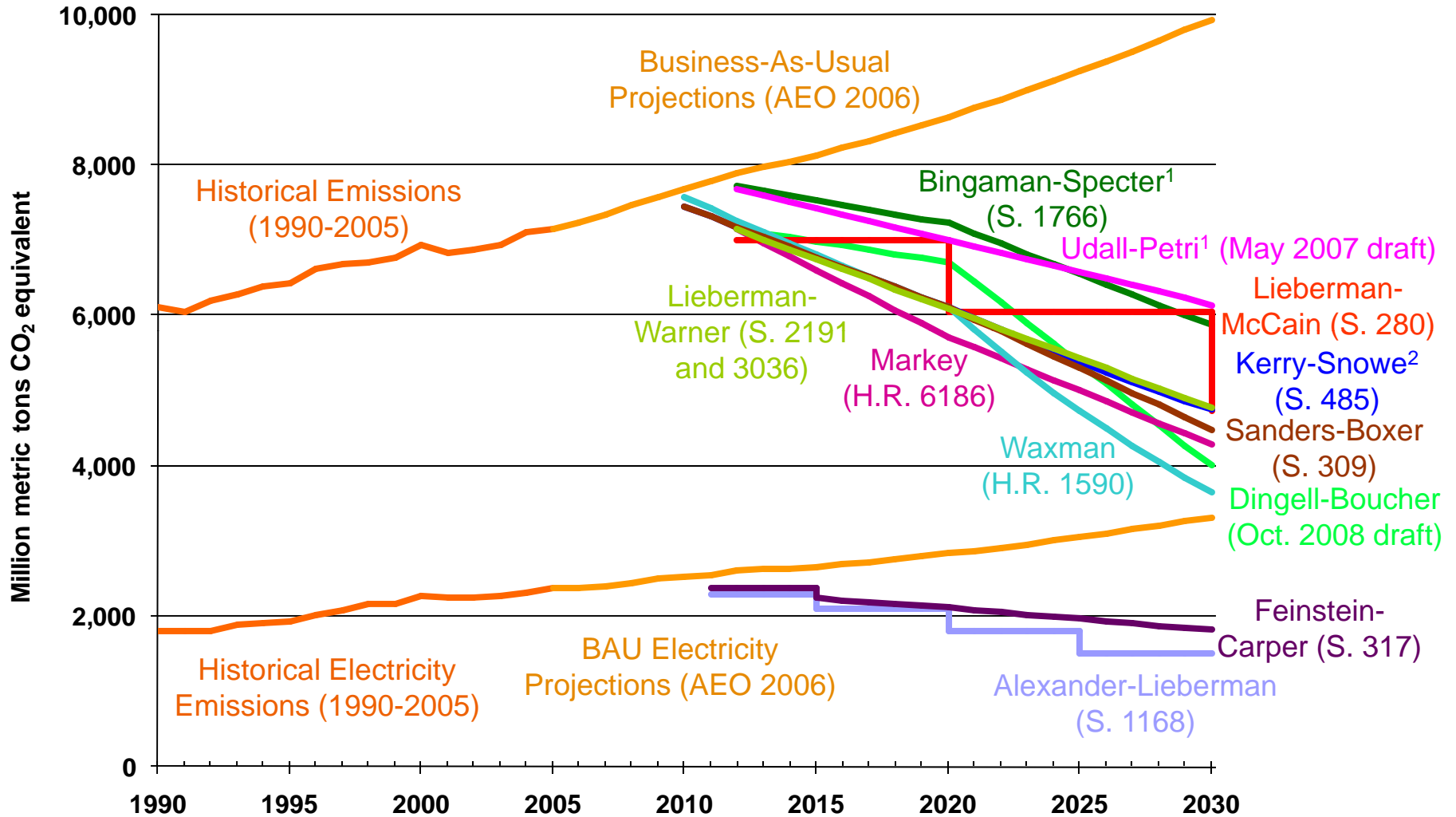
	Who's Regulated	Allowance Allocation	Cost Containment	Offsets	Technology	Competitiveness
Lieberman-Warner (S. 2191), as passed out of EPW	Economy-wide cap: coal and process emissions at emitters; oil refiners, NG processors, and oil/NG importers; and F-gas producers and importers. (Over 80% of US GHG emissions covered.) HFC producers and importers have a separate cap.	33% free to industry (including electric generators), with phase out; 11% to energy customers; 26.5% auctioned (gradually increased to 69.5%) to fund technology deployment, transition assistance, and adaptation; 9% set aside for CCS and sequestration; 10.5% to states; 5% for early action.	"Climate Fed" with discretion to increase use of borrowing and offsets and temporarily expand cap. Borrowing: up to 15% of allowances, for no more than 5 years.	Up to 15% of compliance obligation can be met with domestic sequestration, and another 15% through international allowances and credits.	Technology deployment incentives for zero- and low-carbon generation, advanced coal, cellulosic biomass, and advanced vehicles (around 13% of allowance value). Plus 4% of allowances as bonus for CCS projects.	Bulk, energy-intensive imports from countries w/o comparable policy require "int'l reserve" allowances" (essentially a border tax) after 2020.
S. 3036, L-W substitute amendment	Adds coverage of NG produced in federal waters of Alaska Outer Continental Shelf. Otherwise identical.	32% free to industry w/ phase out; 13% to energy consumers; 28% used for federal programs, incl. technology, transition assistance, adaptation, and deficit reduction; 15% to states; 12% for CCS, sequestration, and early action.	Adds a reserve auction for 2012-2027 at \$22-30 per metric ton. Establishes a floor price for regular auctions of \$10/ton.	Domestic offsets for up to 15% of the annual cap; int'l offsets up to 5%; int'l forest carbon offsets up to 10%. Int'l allowances may be used if these limits not met, but total offsets limited to 30%.	Similar provisions but decreased funding (now around 10% of allowance value). 3% for CCS bonus allowances.	Allowances required starting in 2014. More imports covered, both primary products and manufactured goods.
Dingell-Boucher (October draft)	Economy-wide cap: electric and industrial facilities at emitters; producers and importers of petroleum and F-gases; NG distributors. (Over 80% of US GHG emissions covered.) Phase-in of coverage for industry (2014) and NG (2017).	Four proposed allocation schemes: all include apprx. 10% each for EE, clean tech., and low income assistance. One focuses allocation on the electricity sector, a second on the industrial sector, a third on industry and federal programs, and a fourth on consumer rebates.	Reserve auction, with reserve price at \$20-30/MT in 2012; rises to 30-100% above rolling spot price average. Borrowing: up to 15% of allowances, 5 year limit, 8% ann. interest.	Initially 5% of obligation can be met with domestic and international offsets; gradually increasing to 35% of obligation in 2025 (20% domestic, 15% int'l). Unlimited int'l emission allowances from 2025.	National building codes increase efficiency; allowance revenues for state EE funds; bonus allowances for CCS and renewables; funds for deploying advanced vehicles and biofuels.	Importers of emissions-intensive goods from countries w/o comparable policy must buy int'l reserve allowances.
Markey (H.R. 6186)	Economy-wide cap: electric and industrial facilities at emitters; producers and importers of petroleum and F-gases; NG distributors. (Over 80% of US GHG emissions covered.)	6% free to industry w/ phase out, 94% auctioned. (100% auction by 2020.) Revenues: 50% to general fund; 25% to tech. RD&D; 17.5% to domestic transition assistance, adaptation, sequestration, and conservation; 7.5% to international projects.	Borrowing: up to 15% of allowances, for no more than 5 years with 10% annual interest rate.	Up to 15% of obligation can be met with domestic offset credits; an additional 15% can be met with international emission allowances or offset credits.	Creates tech. fund w/ 4% of revenues to renewable & efficiency RD&D, 5% to commercial renewables, 2.5% to CCS, 1% to tech. rebates. 12.5% to national energy efficiency fund.	Importers of energy-intensive primary goods from countries w/o comparable policy must buy int'l reserve allowances.
Bingaman-Specter (S. 1766)	Economy-wide cap: coal and some industrial emissions at emitters; oil refiners, NG processors, and oil or NG importers; and F-gas producers and importers. (About 80% of emissions covered.)	53% free to industry (with phase out); 24% auctioned to support R&D, transition assistance, adaptation; 14% set aside for CCS and sequestration; 9% to states.	\$12/metric ton CO ₂ safety valve, rising at 5% per year above inflation.	Unlimited domestic offsets including methane and SF ₆ . Limits on international offsets (10% of cap) and domestic agricultural offsets (5% of cap).	Detailed technology development programs funded from allowance auction revenues (12-26% of auction revenues).	Bulk, energy-intensive imports from countries w/o comparable policy require permits after 8 years.
Udall-Petri (May draft and staff talks)	Economy-wide cap: upstream fossil-fuel sources (e.g., producers and importers), along with industrial emissions. (About 80% of emissions covered.)	20% free to industry. 80% auctioned to support RD&D; developing country engagement; adaptation, dislocation aid; sequestration; debt reduction.	\$12/metric ton CO ₂ safety valve, rising at 2-8% per year above inflation.	Unlimited geological sequestration offsets. 5% of allowances set aside to fund biological sequestration and 1% for CCS projects.	Establishes ARPA-E to fund technology advancement projects (24% of auction revenues).	Inaction by developing countries can justify delay in safety valve escalation.

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Lieberman-McCain (S. 280)	Economy-wide cap: large downstream at emitter; transport emissions regulated at refinery. (Appr. 75% of emissions covered.)	Discretion of EPA, with guidance for some free allocation and an auction to fund R&D, transition assistance, adaptation measures.	Borrowing: up to 25% of allowances, for no more than 5 years.	Up to 30% of obligation can be met with domestic sequestration projects and international offsets.	Revenues from some auctioned allowances used for RD&D.	No provisions.
Kerry-Snowe (S. 485)	Economy-wide cap: point of regulation at discretion of EPA. (Coverage TBD by EPA.)	Discretion of the President with guidance from the EPA.	No provisions.	USDA sets rules for domestic biological sequestration.	Vehicle emission rules; efficiency & renewable standards for electric generation; additional bill-specific mandates.	
Waxman (H.R. 1590)				No provisions.		
Sanders-Boxer (S.309)	Economy-wide cap: EPA has discretion to implement a market-based allowance program to achieve cap. (Coverage TBD by EPA.)					
Feinstein-Carper (S. 317)	Electricity-sector cap: power plants. (The electricity sector is 34% of US GHG emissions.) (S. 1168 also covers utility SO ₂ , NO _x , and mercury emissions.)	85% free to industry, based on generation (updated annually), and phased out by 2036.	Borrowing up to 10%, for no more than 5 years.	International offsets up to 25% of cap; extensive domestic biological offsets.	Distributes auction revenues to multitude of technology programs.	
Alexander-Lieberman (S. 1168)		75% free to industry, based on heat input.	No provisions.	Domestic offsets in five categories, including methane, SF ₆ , efficiency, and forest sequestration.	NSPS for CO ₂ emissions from new electric generation units.	
Stark (H.R. 2069)	Economy-wide tax: fossil fuels taxed by CO ₂ content at the point of production and import. (Almost 80% of US GHG emissions.)	100% revenues to US Treasury.	\$3/metric ton CO ₂ , rising \$3 annually.	Tax refunds for sequestered carbon: CCS, plastics.	No provisions.	Tax applied to fossil fuel imports; fossil fuel exports are exempt.
Larson (H.R. 3416)		1/6 of revenues to R&D, 1/12 to industry transition assistance (with phase out), remainder to payroll tax rebates.	\$16.5/metric ton CO ₂ , rising 10% plus inflation annually.	Tax refunds for domestic sequestration and HFC destruction projects.	1/6 of tax revenues (up to \$10B annually) for clean energy technology R&D.	

Comparison of Emission Reduction Goals in Legislative Proposals in the 110th Congress (as of October 31, 2008)



This graph depicts emissions targets from some of the major climate change bills in Congress. Targets are based on comparison with historical year emissions. Kerry-Snowe, Sanders-Boxer, and Waxman specify future emissions as a percentage of 1990 emissions. For Lieberman-Warner, Lieberman-McCain, Udall-Petri, and Bingaman-Specter, emission targets for covered sectors are related to historical emissions for those sectors, and total emissions are assumed to match those in the corresponding historical year.

¹ Bill contains flexibility mechanisms which allow actual emissions to rise above the target.

² The Kerry-Snowe target is overlaid by others: it is nearly identical to Sanders-Boxer before 2020 and to Lieberman-Warner from 2020-2030.