Appendix

Emissions Reduction Targets in Federal Multi-Sector Climate Bills

This table describes the regulated sectors and emissions reduction targets required by seven major federal climate bills. Targets for the year 2050 are compared with the 2000 emissions levels provided in the April 2007 Environmental Protection Agency (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks for 1990–2005.

	H.R. 1590 Waxman (D-CA): **Safe Climate Act of 2007**	**H.R. 620** Olver (D-MA)-Gilchrest (R-MD): **Climate Stewardship Act of 2007**	**S. 280** Lieberman (I-CT)-McCain (R-AZ): **Climate Stewardship and Innovation Act of 2007**	**S. 309** Sanders (I-VT)-Boxer (D-CA): **Global Warming Pollution Reduction Act**	**S. 485** Kerry (D-MA)-Snowe (R-ME): **Global Warming Reduction Act of 2007**	Lieberman (I-CT)-Warner (R-VA): **America's Climate Security Act of 2007** (proposal language only)[1]	**S. 1766** Bingaman (D-NM)-Specter (R-PA): **Low Carbon Economy Act of 2007**
Coverage	Economy-wide. Regulated entities to be determined by the EPA; provides for regulatory standards for electricity generation, fuels, and transportation.	Covered sectors include electric power, industrial or commercial facilities that emit more than 10,000 metric tons (mt) CO_2eq per year, and petroleum refineries or importers in the transportation sector that release more than 10,000 mt per year. According to the EPA inventory, the covered sectors represent 85% of the economy, but coverage will likely be significantly lower because of exempted sources.[1]	Covered sectors include electric power, industrial or commercial facilities that emit more than 10,000 metric tons (mt) CO_2eq per year, and petroleum refineries or importers in the transportation sector that release more than 10,000 mt per year. According to the EPA inventory, the covered sectors represent 85% of the economy, but coverage will likely be significantly lower because of exempted sources.[1]	Economy-wide. Regulated entities to be determined by the EPA; provides for regulatory standards for electricity generation and transportation.	Economy-wide. Regulated entities to be determined by the EPA; provides for regulatory standards for electricity generation, fuels, and transportation.	Covered sectors include electric power, transportation, and industrial entities (as defined in the EPA inventory) that emit more than 10,000 metric tons (mt) CO_2eq per year. According to the EPA inventory, these sectors represent 80% of the economy, but coverage will likely be significantly lower because of exempted sources.[1]	Petroleum refineries, natural gas processing plants, fossil fuel importers and producers, and non-CO_2 gas importers, as well as coal facilities that use more than 5,000 tons of coal per year (mainly utilities). According to the emissions reduction target chart in the bill (Sec. 101), these sectors represent 85% of the economy. The bill sets a ceiling on the price of emissions allowances, allowing covered sources to pay into a fund instead of making emissions reductions if the price ceiling is exceeded.[1]
Emissions Reduction Targets							
2010	Emissions reductions begin.	Starting in 2012, emissions from covered sectors must be 6,150 million metric tons (mmt) CO_2eq. [4]	Starting in 2012, emissions from covered sectors must be 6,130 million metric tons (mmt) CO_2eq.[4]	Emissions reductions begin; 2% annual reduction 2010–2020.	Emissions reductions begin.	2005 levels by 2012 for covered sectors.[4]	Emissions reductions begin in 2012.
2020	1990 levels by 2020, with a 2% annual reduction 2011–2020.	From 2012–2019, emissions stay at 6,150 mmt CO_2eq.	From 2012–2020, emissions stay at 6,130 mmt CO_2eq.	1990 levels by 2020.	1990 levels by 2020.	10% below 2005 levels for covered sectors.	2006 levels.
2030	5% annual reduction 2021–2050.	From 2020–2029, emissions must be 5,232 mmt CO_2eq for covered sectors.	From 2021–2030, emissions must be 5,239 mmt CO_2eq for covered sectors.	One-third of 80% below 1990 levels.	2.5% annual reduction 2021–2030.	30% below 2005 levels for covered sectors.	1990 levels.
2040	5% annual reduction 2021–2050.	From 2030–2039, emissions must be 3,858 mmt CO_2eq for covered sectors.	From 2031–2040, emissions must be 4,100 mmt CO_2eq for covered sectors.	Two-thirds of 80% below 1990 levels.	3.5% annual reduction 2031–2050.	50% below 2005 levels for covered sectors.	
2050	5% annual reduction 2021–2050, reaching 80% below 1990 levels by 2050 (83% below 2000 levels).	Beginning in 2050 and thereafter, emissions must be 1,504 mmt CO_2eq for covered sectors (57% below 2000 levels).[4]	Beginning in 2050 and thereafter, emissions must be 2,096 mmt CO_2eq for covered sectors (47% below 2000 levels).[4]	80% below 1990 levels by 2050 (83% below 2000 levels). If CO_2eq concentrations exceed 450 ppm or if global average temperatures increase by 2°C above pre-industrial levels, reduction targets would accelerate.	3.5% annual reduction 2031–2050, reaching 65% below 2000 levels by 2050.	70% below 2005 levels for covered sectors (47% below 2000 levels).[4]	Conditional target of at least 60% below 2006 levels by 2050, contingent on sufficient international action as determined by interagency review, presidential recommendation to Congress, and subsequent congressional action.

(*footnotes on next page*)

[1] The information presented here could change once the proposal is introduced as legislation.

[2] Some external analyses suggest that exempted and other uncapped sources could reduce the bill's coverage to as little as 74% of the economy. However, our analysis assumes complete sector coverage for simplicity.

[3] If the price ceiling is exceeded, emissions reductions could slow or cease. In that event, the bill's emissions reduction targets would not be met.

[4] We assume emissions levels specified in the bill pertain to covered sectors only. We assume uncovered sectors grow at the "business as usual" rate projected by the Energy Information Administration's low-growth scenario (EIA 2007).

[5] Section 101 of the bill sets emissions levels for each year from 2012–2030. The bill's 2012 emissions level is consistent with 85% of the economy-wide emissions for that year as projected by the EIA. For this reason, we assume the bill's covered sectors represent 85% of the economy, with uncovered sectors growing at the "business as usual" rate projected in EIA 2007.