BROOKINGS

The Distribution of Allowance Value in the Senate Climate Bill

Ted Gayer, *Co-Director, Economic Studies Program, The Brookings Institution*
Joseph A. Pechman Senior Fellow

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(percent of total allowance value)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Electricity local distribution companies	51	51	51	35	35	35	35	35	35	35	35	35	35	32	24	16.5	8.5	0	0	0	0	0	0
Natural gas local distribution companies	0	0	0	9	9	9	9	9	9	9	9	9	9	7.2	5.4	3.6	1.8	0	0	0	0	0	0
Home heating oil & propane consumers	1.9	1.9	1.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.2	0.9	0.6	0.3	0	0	0	0	0	0
Trade-Exposed Industries	2	2	2	15	15	15	15	15	15	15	15	15	15	12	9	6	3	0	0	0	0	0	0
Industrial Energy Efficiency	0.5	0.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refiners	4.3	4.3	4.3	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3	2.25	1.5	0.75	0	0	0	0	0	0
Commercial deployment of CCS	0	0	0	0	0.8	0.8	0.8	4.5	5	7.4	7.4	7.4	7.4	8	8	8	8	10	10	10	10	10	0
Clean vehicle technology	1	1	1	1	1	1	1	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Low-carbon industrial technologies R&D	1	1	1	1	1	1	1	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean energy technology R&D	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy efficiency & renewable energy	2.5	2.5	2.5	2	2	2	1	1	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Community protection	0	0	0	0	0	0	0.75	0.75	1.1	1.6	1.6	1.6	1.6	1.75	2	2.5	2.75	3	3	3	3	3	0
International adaptation & global security	0	0	0	0	0	0	0.75	0.75	1.1	1.6	1.6	1.6	1.6	1.75	2	2.5	2.75	3	3	3	3	3	0
Early action credits	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
National surface transportation system	4	4	4	3.07	2.73	2.73	2.53	2	2	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	2.23	2.23	2.23	2.23	2.23	0
Transportation greenhouse gas reduction	4	4	4	3.07	2.73	2.73	2.53	2	2	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	2.23	2.23	2.23	2.23	2.23	0
Consumer relief	12.3	12.3	12.3	12.3	12.3	12.3	12.3	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6	11.5	11.5	11.5	11.5	11.5	12.5
Universal refund program	0	0	0	0	0	0	0	0	0	0	0	0	0	6.08	16.13	25.28	35.33	40.88	40.88	40.88	40.88	40.88	58.35
Highway trust fund	4	4	4	3.07	2.73	2.73	2.53	2	2	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	2.23	2.23	2.23	2.23	2.23	0
Deficit reduction	8.5	8.5	8.5	8.25	8.45	8.45	8.55	8.15	8.45	8.75	8.75	8.75	8.75	10.6	13.9	17.1	20.4	24.9	24.9	24.9	24.9	24.9	29.2
Percent of allowances auctioned	24.8	24.8	24.8	23.6	23.5	23.5	23.4	20.8	21.1	21.3	21.3	21.3	21.3	29.2	42.6	54.9	68.3	79.5	79.5	79.5	79.5	79.5	100

The table above shows the percentage distribution of the value of the allowances in the cap-and-trade program in The American Power Act, the bill introduced yesterday, co-sponsored by Senators John Kerry and Joe Lieberman.

The bill auctions only 24.8 percent of the allowances in the early years (the share devoted to auctions is highlighted in blue), the remainder of the allowances being given away to such things as electricity local distribution companies, trade-exposed industries, refiners, commercial developers of carbon capture and storage, and a National Industrial Innovation Institute. The auctioning ramps up to 79.5 percent of allowances in 2030, and then full auctioning only occurs in 2035.

None of the auction revenue is used to reduce high marginal tax rates on income or capital, although some revenue is used for "consumer relief," which includes a tax credit for households above 150 percent of the poverty line, which is phased out starting at 250 percent of the poverty line. Some of the auction revenue is also used for a "universal refund," which is a lump-sum payment made to all eligible taxpayers, adjusted for family size.

Only a small percentage of the allowance value is used for deficit reduction. A specific allocation for deficit reduction does not occur until 2026, but section 781(h) states that any "remaining allowances ... not otherwise obligated" under the bill will go to deficit reduction. The total allowance value dedicated to deficit reduction is between 8 and 9 percent until 2026, when it ramps up to about 25 percent by 2030.

The virtue of a cap-and-trade program is that it establishes a market price for a pollutant and allows flexibility within and across regulated entities in how to reduce emissions. This cost-reducing virtue exists whether allowances are given away for free or are instead auctioned by the government. But the means of allocating allowances can indeed have economic consequences.

First, economic harm can occur if the distribution of allowances is contingent on economic actions. For example, the American Power Act distributes some allowances to electricity local distribution companies "for the benefit of retail ratepayers," suggesting that the goal will be to prevent higher prices from passing through to consumers. This could dampen the incentive for cost-reducing conservation, raising the overall cost of complying with the program.

Second, economic harm can occur by forgoing the use of auction revenue to offset harmful taxes and deficits. As I've written before, a cap-and-trade program works by increasing the price of energy and transportation, which as a consequence lowers real wages. This decrease in real wages magnifies distortions from pre-existing taxes, such as the income tax. The way to reduce these costs is by using the auction revenue to lower high marginal tax rates or deficits.

Giving away the allowances for free misses an opportunity to substantially lower the overall cost of a cap-and-trade program. If all the allowances in the Senate bill were auctioned by the government, this would yield substantial revenue that could be used to help close our deficit. The bill would raise about $60 to $80 billion annually in the early years, rising to about $100 billion per year in about 25 years, and then dropping to about $70 billion per year in later years. Over the ten-year window, this makes potential cap-and-trade revenue on par with our expected revenue from excise taxes, which amounts to about half of a percent of GDP.

By failing to use a full allowance auction to offset economically harmful taxes and deficits, the Senate bill sacrifices economic gain for political support from interest groups.