



CLEAN & PROSPEROUS
CALIFORNIA

**Money Left on the Table:
Restoring Cap-and-Trade Auction
Revenues Through Legislative
Reauthorization Clean and
Prosperous California**



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1. Executive Summary

California gave away up to nearly \$3 billion in revenues from its cap-and-trade program over the last year. This lost revenue, equal to roughly one-quarter¹ of California's budget deficit, would have otherwise been directly invested into communities and used to lower utility bills for ratepayers. Weak revenue results stem from tumbling allowance prices that have fallen from an all-time high of nearly \$42 to near-historic lows of \$26 caused by uncertainty over legislative extension and delays in regulatory rulemaking. Restoring cap-and-trade auction revenue requires two actions in order: (1) the legislature acting as soon as possible to extend the cap-and-trade program beyond 2030, and (2) the California Air Resources Board (CARB) resuming its rulemaking immediately thereafter and delivering anticipated allowance supply cuts. We expect California will continue losing between around \$600 million and \$1 billion in revenue from *each* quarterly auction until the California legislature reauthorizes the cap-and-trade program. Legislative reauthorization would position the cap-and-trade program to provide a reliable source of funding for California during uncertain times.

2. Overview of Analysis

Uncertainty over legislative extension and unmet expectations over supply cuts have suppressed allowance prices in California's cap-and-trade program over the last 18 months. We estimate that increasingly weak results from the last five quarterly auctions have left between \$1.80 to \$2.94 billion of funding on the table that would have otherwise been directly invested into communities through the Greenhouse Gas Reduction Fund (GGRF) and used to lower utility bills for ratepayers through the California Climate Credit (CCC).

The most recent cap-and-trade auction in May was undersubscribed, meaning fewer allowances were purchased than offered for sale. Only 81% of current vintage allowances were purchased at the minimum floor price of \$25.87. We estimate lost revenue between around \$600 million and \$1 billion from the May 2025 auction and expect similar losses from future auctions—including the upcoming auction in August 2025—until California leadership intervenes. If auction revenues are restored, then these funds could be used to insulate California's progress on climate change and wildfire prevention from setbacks stemming from President Trump's One Big Beautiful Bill.

Although there are many drivers of suppressed allowance prices, our analysis suggests the primary driver is a delayed rulemaking from the California Air Resources Board (CARB). Swift legislative extension is a necessary step toward reviving this regulatory rulemaking, which started

¹ [California budget deal finalizes \\$12B deficit fix | Sacramento Bee.](#)



in mid-2023 by proposing allowance supply cuts to align the cap-and-trade program with the 2022 Scoping Plan² and California's 2045 carbon neutrality target.³ These supply cuts are also necessary to achieve California's 2030 climate target.⁴ Extension of the cap-and-trade program will provide CARB guidance on implementing the regulation in line with legislative priorities.

3. Technical Appendix

The technical appendix describes our estimates of lost auction revenue (Section 3a) and our analysis of allowance price movements (Section 3b). Section 3b is further organized into allowance price increases, allowance price decreases, and analysis of other drivers beyond uncertainty over extension and delayed regulatory rulemakings.

a. Estimating Lost Auction Revenue

Table 1 estimates lost auction revenue from the last five quarterly cap-and-trade auctions between \$1.80 and \$2.94 billion. The lower range represents lost revenue if we only count funds collected for the Greenhouse Gas Reduction Fund, which invests in projects that reduce emissions in California communities.⁵ The upper range represents lost revenue if we also include the value of consigned allowances to utilities, most of which is returned to ratepayers on their gas and electric bills through the California Climate Credit.⁶ Table 1 shows the estimates of lost revenue increased over time as auction prices have fallen, starting with a revenue loss of \$230 million USD in the May 2024 auction up to \$961 million USD for the May 2025 auction.

To calculate lost revenue, we subtract actual revenues⁷ from the expected revenue that would have been achieved without uncertainty over legislative extension or regulatory delays. In the absence of uncertainty, we assume that allowance prices over the last year would have remained at \$41.76 for current vintages and \$41.00 for future vintages. These are the settlement prices from the February 2024 auction⁸ when market participants had few concerns over legislative extension and strong conviction that CARB would expeditiously implement the supply cuts necessary to align the cap-and-trade program with California's 2030 target. Although this is close to the all-time high value of allowance prices, we argue it serves as a reasonable counterfactual because it represents a likely allowance price if supply cuts had proceeded as initially anticipated.

² The 2022 Scoping Plan "identifies a need to accelerate [California's] 2030 target to 48 percent below 1990 levels". See Page 71: [2022 Scoping Plan Update](#).

³ The proposed regulatory amendments, if promulgated, would cut allowance supply by 115 to 265 million allowances amounting to a 10% and 23% reduction, respectively, in 2026 through 2030 allowance supply.

⁴ A.B. 1279 (Muratsuchi) establishes a goal for California to "achieve carbon neutrality as soon as possible, but no later than 2045 and maintain net negative greenhouse gases thereafter."

⁵ [California Climate Investments Funded Programs | California Air Resources Board](#).

⁶ [California Climate Credit](#).

⁷ These values are consistent with CARB's calculations: [Summary of Proceeds to California and Consigning Entities](#).

⁸ [Summary of Auction Settlement Prices and Results](#).

As we describe at length in Section 3b, allowance prices began falling when market participants began suspecting a rulemaking delay and became increasingly anxious over legislative extension.

Table 1
Estimates of Lost Revenue (Million USD) in California’s Cap-and-Trade Auctions

Auction	Actual Revenue			Expected Revenue			Lost Revenues		
	Consigned	CARB	Total	Consigned	CARB	Total	Consigned	CARB	Total
May-25	550	596	1146	888	1220	2107	338	624	961
Feb-25	634	851	1485	905	1220	2125	271	369	640
Nov-24	669	990	1659	875	1305	2180	206	315	521
Aug-24	592	943	1535	818	1302	2119	226	359	584
May-24	740	1166	1906	835	1302	2137	95	136	230
Total	3185	4547	7731	4320	6349	10668	1135	1802	2937

Source: CARB Auction Reports and Author’s Calculations

b. Analyzing Allowance Price Movements

Figure 1 traces allowance price over the last two years. Allowance prices rose to an all-time high of \$41.91 in early 2024 as market participants priced in the expectation that CARB would substantially cut future supply to align the cap-and-trade program with California’s 2030 climate targets, given clear direction from Governor Newsom⁹ and the California Legislature¹⁰ to increase the state’s climate ambition by 2030 and through 2045. However, since March 2024, allowance prices have undergone a bumpy descent back down to their minimum values and settling around \$26.

Figure 1 annotates significant events as bullish (green exes) or bearish (red exes) for allowance prices. The y-axis shows dollars per allowance in USD. The blue line shows allowance prices. We use prices for future 2025 vintages because they are the most frequently traded type of contract. The dotted blue line indicates the minimum price at quarterly cap-and-trade auctions operated by CARB.

⁹ Governor Newsom endorsed an increase in California’s 2030 climate target from 40% to 48% by 2030 as outlined in the Scoping Plan: [California Releases World’s First Plan to Achieve Net Zero Carbon Pollution | Governor of California](#).

¹⁰ A.B. 1279 (Muratsuchi) establishes a goal for California to “achieve carbon neutrality as soon as possible, but no later than 2045 and maintain net negative greenhouse gases thereafter.”

Figure 1
Allowance Prices in California's Cap-and-Trade Program Since February 2022



Source: Intercontinental Exchange and Author's Calculations

i. Allowance Price Rallies from November 2022 through March 2024

A steady drumbeat of regulatory documents and informal workshops held by CARB motivated an unprecedented \$15 rally in allowance prices between November 2022 and February 2024. This flurry of activity was aimed at cutting allowance supply in response to several motivating factors including the 2022 Scoping Plan, the updated AB 32 GHG Emission Inventory, Executive Orders, existing legislation for California's 2030 climate target, and new legislation for California's 2045 carbon neutrality target.¹¹ The bullets below detail each major event along with corresponding movements in allowance prices.

¹¹ [Cap-and-Trade Workshop June 14 2023](#)

- In June 2023, CARB held a joint workshop with Quebec to provide context for the proposed rulemaking. CARB outlined a range of allowance budget scenarios for 2030 including 40%, 48%, and 55% climate targets.¹² Allowance prices increased by about half a dollar around this workshop.
- In July 2023, CARB elaborated on allowance budget scenarios by identifying the number of allowances that would need to be cut. This workshop seemed to cement CARB's intent to cut allowance supply in the years leading up to 2030 and through 2045 to align with California's new climate targets.¹³ Allowance prices increased by about \$2.25 around this workshop.
- In October and November 2023, three additional workshops laying out finer details of allowance supply cuts led to a sustained rally.¹⁴ Allowance prices increased by about \$7 dollars during this time, from \$35 to an all-time high of \$41.91 in February 2024.

ii. Allowance Price Tumble Starting from March 2024

Allowance prices began a bumpy descent starting in March 2024 that is still ongoing. Allowance prices dropped over \$15 over the course of a year, from an all-time high of nearly \$42 down to minimum prices below \$26 before settling at slightly over \$27. A series of rulemaking delays and growing uncertainty around legislative extension drove these negative price movements. The bullets below detail each major event along with corresponding movements in allowance prices.

- March 2023 Hearing: At the annual Joint Legislative Committee on Climate Change Policies (JLCCCP) hearing, a presenter proposed that CARB should consider devaluing banked allowances, which the market interpreted as bearish.¹⁵ At the same hearing, CARB stated that the rulemaking could continue into early 2025 before clarifying that it intended to bring a rulemaking package to the Board in 2024.¹⁶ At the same time, a series of technical features kicked in that led to lower allowance prices.¹⁷ The combination of these events caused the allowance price to drop \$3 in one day, an unprecedented one-day decrease outside of major events like the Covid Pandemic.
- April 2024 SRIA: CARB released its cost-benefit analysis, known as the Standardized Regulatory Impact Assessment (SRIA), for three allowance supply cut scenarios.¹⁸ The release of the SRIA signaled positive momentum through the regulatory process.

¹² [Cap-and-Trade Workshop June 14 2023](#)

¹³ [Cap and Trade Workshop July 27, 2023.](#)

¹⁴ [California Public Workshop](#); [Cap-and-Trade Community Meeting Oct30Nov7](#); [Joint Cap-and-Trade Workshop Nov 16.](#)

¹⁵ Elevate Climate. 2024. Event Readout: JLCCCP Hearing. March 11th.

¹⁶ Clear Blue Markets. 2024. Live Update: CCAs Prices Declined by Almost 8% on 13 March 2024.

¹⁷ Clear Blue Markets. 2024. Live Update: CCAs Prices Declined by Almost 8% on 13 March 2024.

¹⁸ [Cap-and-Trade Program SRIA | California Air Resources Board.](#)

Allowance prices partially rebounded by increasing \$1.29 on the day the SRIA was released.

- April and May 2024 Workshops: CARB suggested in the April workshop that there would be tens of millions of allowances released into the market as the potential program changes went into effect, which would cause downward pressure on allowance prices. The May workshop discussed topics related to allowance allocations, emissions coverage, and reporting. Taken together, the spring workshops contributed to bearish market sentiment because they did not reassure an impatient market that supply cuts were necessarily forthcoming.¹⁹ Prices dropped around \$4.50 over several days from nearly \$40 on May 29 to below \$36 on June 5, 2024.
- July 2024 Workshop: CARB stated that the rulemaking would not take effect in time for an allowance supply cut to be implemented in 2025, representing a major delay given that allowance supply cuts were previously expected to be promulgated in 2024.²⁰ Prices dropped nearly two dollars during the week following the workshop resting at \$33.53 by July 16.
- August 2024 Auction Results: CARB released Q3 2024 auction results revealing that the current auction price settled at its lowest value in 18 months.²¹ Allowance prices then dropped about \$1.50 or so from about \$32 on August 20 to around \$30.50 on August 21, 2024. This knock-on effect suggests that some market participants may have been surprised by the low auction results.
- September 2024 Remarks: At a conference, CARB commented that the formal rulemaking would begin “in the coming weeks” with the release of proposed amendments known as the Initial Statement of Reasons (ISOR). Allowance prices rallied around \$1.50 over several days.
- October 2024 Market Notice and Subsequent Delay: With the late summer start to the formal rulemaking off the table, California and Quebec released one-page market notices confirming the scope of expected program amendments. California’s market notice stated the formal rulemaking would begin “in the coming weeks” with the release of the ISOR.²² This initially caused a price rally of around \$1.50. However, around a month later, CARB confirmed that the formal rulemaking was again delayed to early 2025 and updated their

¹⁹ Carbon Pulse. 2024. [Analysts revise down near-term CCA forecasts amid workshop disappointment, predict low auction clear in Washington](#) Published 17:04 on June 3, 2024 / Last updated at 17:04 on June 3, 2024 / [Bijeta Lamichhane](#).

²⁰ [Cap-and-Trade Workshop 07/10/24](#).

²¹ Carbon Pulse. 2024. [WCI Q3 auction settles at lowest in 18 months, sparking volatility in secondary market](#) Published 12:52 on August 21, 2024 / Last updated at 10:46 on August 22, 2024 / [Joan Pinto](#).

²² https://ww2.arb.ca.gov/sites/default/files/cap-and-trade/nc-CT_Notice_Oct_2024.pdf.

website accordingly.²³ Allowance prices dropped around \$3 from around \$36 before the Market Notice to around \$33 after CARB updated its website.

- January 2025 Remarks: At a conference, CARB commented on challenges it faced in early 2025 including wildfires, lawsuits, and the incoming Trump Administration. While supportive of the cap-and-trade rulemaking, CARB stated at that the release of the formal rulemaking was “not imminent.” Importantly, CARB emphasized the need to support the legislature as it contemplates legislative extension. The price dropped substantially by \$3 from about \$33.50 on January 13 to about \$30.50 on January 14, 2025.
- March 2025 Update: CARB updated its website on March 12 with a statement that expressed a general commitment to pursuing the rulemaking in 2025, while saying that the “administration is working with the legislature as they consider extension of the cap-and-trade program”.²⁴ Allowance prices dropped by \$2 from dollars from \$30 to \$28 from March 11 to March 13, 2025.

c. Political Announcements and Legal Threats Play a Relatively Small Role

Our preceding analysis identifies uncertainty over legislative extension and delays in regulatory rulemaking as the primary drivers of allowance price changes over the last two years. In contrast, political announcements from California’s leadership and potential legal threats from President Trump seem to play a relatively small role in explaining allowance price movements. The bullets below detail each major event along with corresponding movements in allowance prices.

- July 2024 Announcement: California Senate President Pro Tempore Mike McGuire announced on July 29, 2024 that the Senate would be pursuing legislative extension in 2025, raising prices by around \$1.50.²⁵
- February 2025 Statement: Allowance prices remained steady at \$30 following Governor Newsom's February 26 statement that legislative extension in 2025 is “not absolutely necessary”.²⁶
- April 2025 Executive Order: President Trump’s Executive Order on Protecting American Energy from State Overreach, which specifically targeted the California cap-and-trade

²³ [Cap-and-Trade Program | California Air Resources Board.](#)

²⁴ <https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program>.

²⁵ <https://subscriber.politicopro.com/article/2024/07/calif-looks-to-extend-carbon-market-five-years-ahead-of-end-date-00171508>.

²⁶ <https://www.politico.com/newsletters/california-climate/2025/02/26/sacramentos-favorite-feedbag-is-drying-up-00206371>.



program, caused a brief drop in allowance prices of around \$2 that then partially recovered in response to fading fears around federal risks.²⁷

- April 2025 Announcement: In response to Trump's Executive Order, California leadership (Governor Newsom, Senate President Pro Temp McGuire, and Speaker Rivas) penned a statement doubling down on the cap-and-trade program and reassuring that legislative extension would occur this year.²⁸ Allowance prices rose about \$1 on this news.
- May 2025 Trailer Bill: Governor Newsom released a cap-and-trade trailer bill on May 14 to extend the cap-and-trade program through the budget process. Allowance prices remained about the same.

5. About Us

Clean and Prosperous California is a nonprofit team of economists and lawyers based in California. We examine carbon pricing through an economic lens by synthesizing evidence from the scientific literature and producing novel research. We believe that economic thinking facilitates smart designs for California's cap-and-trade program so that climate action can be leveraged to solve a variety of statewide problems such as the affordability crisis, devastating wildfires, and budget deficits. Visit us at www.cleanprosperousca.org. Contact our Executive Director, Clayton Munnings, at clayton@cleanprosperousca.org.

²⁷ [WCI Markets: Benchmark CCAs surpass \\$28 as market anxiety eases, WCAs extend gains](#) Published 17:31 on June 26, 2025 / Last updated at 17:31 on June 26, 2025 / [Chris Ward](#), [Bijeta Lamichhane](#) and [Brandon Mulder](#).

²⁸ <https://www.gov.ca.gov/2025/04/15/governor-newsom-legislature-double-down-on-states-critical-cap-and-trade-program-in-face-of-federal-threats/>.