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Cap-and-Trade: Overview and Affordability Considerations

PRESENTED TO:

Joint Legislative Committee on Climate Change Policies
Hon. Jacqui Irwin, Chair

LEGISLATIVE ANALYST'S OFFICE

Cap-and-Trade Program Overview

Program Sets Cap on Statewide Greenhouse Gas (GHG) Emissions. The cap-and-trade program—which was established through Chapter 488 of 2006 (AB 32, Núñez) and renewed through 2030 via Chapter 135 of 2017 (AB 398, E. Garcia)—acts as a market-based mechanism to reduce GHG emissions. Under the program, the California Air Resources Board (CARB) is tasked with setting a declining, aggregate cap on the amount of GHGs allowed to be emitted in the state each year.

Covered Entities Can Comply With Program Requirements in Three Ways. Entities covered under the program represent roughly 75 percent of the state's GHG emissions and include oil refineries, electricity generators and importers, and manufacturing facilities. These entities can meet regulatory requirements in the following three ways:

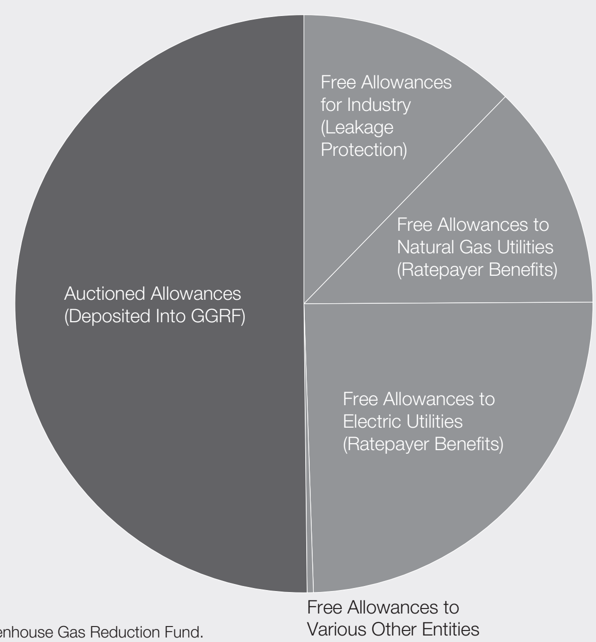
- Reduce their GHG emissions.
- Obtain allowances (essentially a permit to emit one ton of carbon dioxide equivalent) to cover their emissions.
- Purchase "offsets" (paying to support a GHG reduction project elsewhere) to cover their emissions.

Allocation and Sale of Allowances

State Gives Away Roughly Half of the Emission Allowances and Sells the Rest. CARB issues a set number of allowances each year equal to the annual cap that entities can purchase and sell on an open market.

- About half of these allowances are given away for free in order to help protect consumers from significant cost increases and prevent emissions leakage (that is, to keep companies from moving their operations outside of California).
- CARB sells the remaining allowances at auctions four times a year and the revenues are deposited into the state's Greenhouse Gas Reduction Fund (GGRF).
- CARB sets a minimum and maximum price at which allowances can be sold (known as a "floor price" and "price ceiling"). For most of the program's history, allowance prices have been at or near the price floor.

Allocation of Free and Auctioned Cap-and-Trade Allowances in 2023



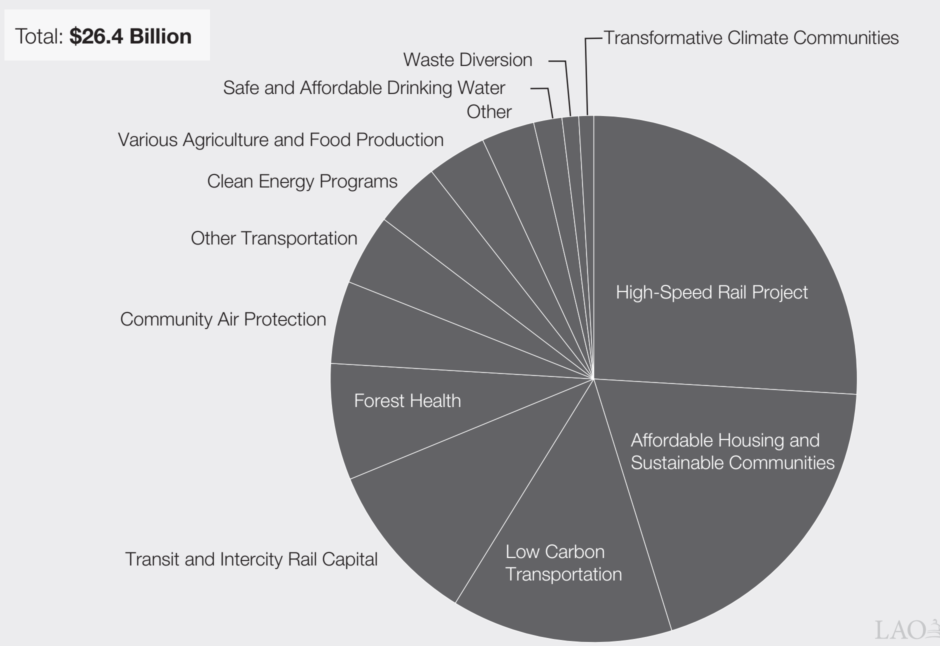
GGRF = Greenhouse Gas Reduction Fund.

GGRF Supports Various Programs

In General, the State Uses Cap-and-Trade Auction Revenues to Support Activities That Further Its Climate Goals. Since its inception, GGRF has supported a wide range of programs, many of which are aimed at reducing GHG emissions. However, from a legal perspective, the funds are considered akin to tax revenues, so they can be used for any purpose.

Cumulative Cap-and-Trade Spending by Area

2013 Through 2023



GGRF Supports Various Programs

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Most GGRF Spending Directed by Statute. By statute, roughly two-thirds of auction revenues are dedicated for certain purposes. Most of these statutory GGRF spending commitments are continuously appropriated, meaning they are not subject to appropriation by the Legislature through the annual budget act. The remaining revenues are available for appropriation by the Legislature for discretionary spending programs.

Continuous Appropriations and Other Statutorily Required GGRF Appropriations

Program	Department	Appropriation Amount
High-speed rail project	HSRA	25 percent of annual revenues
Affordable Housing and Sustainable Communities Program	SGC	20 percent of annual revenues
TIRCP	CalSTA	10 percent of annual revenues
Low Carbon Transit Operations Program	Caltrans	5 percent of annual revenues
Healthy and resilient forest activities	CalFire	$200 million
Safe and Affordable Drinking Water Program	SWRCB	5 percent of annual revenues (up to $130 million)
Manufacturing tax credit	N/A	Roughly $100-$140 million
State Responsibility Area fee backfill	CalFire	Roughly $70-$90 million

GGRF = Greenhouse Gas Reduction Fund; HSRA = High-Speed Rail Authority; SGC = Strategic Growth Council; TIRCP = Transit and Intercity Rail Capital Program; CalSTA = California State Transportation Agency; Caltrans = California Department of Transportation; CalFire = California Department of Forestry and Fire Prevention; and SWRCB = State Water Resources and Control Board.

Effects of Cap-and-Trade Program on Affordability

Free Allowances Generally Offset Potential Impacts to Natural Gas and Electricity Rate-Payers. As a result of the free allowances allocated to electric utilities, California electricity customers receive credits on their bills twice per year (known as the "California Climate Credit") that roughly offset potential rate-payer costs associated with the cap-and-trade program. California natural gas customers also receive credits.

Program Increases Fuel Costs for Consumers. Cap-and-trade does raise costs for certain other types of consumers, such as purchasers of gas and diesel fuel. This is because gas and diesel fuel are relatively carbon intensive and covered entities pass along their costs of compliance to consumers by increasing prices. For example, we estimate that the cap-and-trade program currently adds about 25 cents to each gallon of retail gasoline sold in California.

Key Considerations for Addressing Affordability in the Cap-and-Trade Program

How Should the State Set the Cap to Balance Emissions Reduction Goals With Potential Cost Impacts? A more stringent cap—with fewer available allowances—will lead to greater emissions reductions and likely is needed to help achieve the state's established climate goals. However, increased stringency likely also will raise the price of allowances and consequently increase consumer costs (particularly for retail gasoline and diesel), which can be particularly burdensome for low-income households.

- This comes at a time when the state is implementing changes to other programs and policies—such as updates to the Low Carbon Fuel Standard regulations—that are also expected to increase consumer costs.
- Despite the potential impact to consumers from a tightening of allowances in the cap-and-trade program, this option likely still would be less costly overall than some other programs or policies the state might have to employ to meet its GHG reduction goals.

Estimated Relationship Between Cap-and-Trade Allowance Prices and Gasoline Price Impacts

Per-Allowance Price	Per Gallon Retail Gasoline Price Impact
$32[a]	$0.25
50	0.39
100	0.78
150	1.16
200	1.55

[a] November 2024 allowance price.

Key Considerations for Addressing Affordability in the Cap-and-Trade Program

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What Steps Should the State Consider to Mitigate Potential Cost Impacts? The state has a number of different tools available to limit or offset consumer cost increases that might result from higher allowance prices, including:

- ***Allowance Price Ceiling.*** Depending on where the allowance price ceiling is set, it can help prevent prices from getting too high and thereby mitigate associated costs for consumers. However, a low price ceiling would limit the program's ability to reduce GHGs, and thus require the state to rely more on other programs to meet its climate goals.
- ***Allowance Allocation.*** The state could consider altering its current allowance allocation to certain covered entities. For example, it could increase the number of free allowances it provides to electric utilities to sell on the market, enabling them to generate more revenue for customer bill credits. This would reduce the number of allowances available for other purposes, such as for leakage protection or generating revenue for GGRF.
- ***Use of GGRF Revenue.*** The state could consider using additional GGRF revenues to support rebates—potentially focused on low- and middle-income consumers—for energy cost growth that might result from program changes. Alternatively, it could consider using GGRF revenues to reduce other costs for consumers, such as by paying for wildfire mitigation costs that otherwise would be funded by electricity ratepayers.

Key Considerations for Addressing Affordability in the Cap-and-Trade Program

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What is the Legislature's Preferred Involvement in Making Program Changes to Address Affordability and Other Legislative Priorities? Under current law, CARB has relatively broad authority to make decisions about many aspects of the cap-and-trade program, including setting the price ceiling, determining the overall number of allowances issued annually under the program, and specifying the allocation of allowances to various entities.

- The Legislature could choose to (1) continue the practice of deferring these types of decisions to CARB or (2) provide additional statutory direction to CARB in certain key areas to ensure that its policy priorities—such as related to affordability—are reflected in the program's design.