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Cap-and-Trade Spending Overview

PRESENTED TO:

Senate Budget and Fiscal Review Subcommittee No. 2 on Resources, Environmental Protection and Energy
Hon. Josh Becker, Chair

LEGISLATIVE ANALYST'S OFFICE

Cap-and-Trade Program Overview

The cap-and-trade program acts as a market-based mechanism to reduce greenhouse gas (GHG) emissions by creating an annual "cap" on the level of allowable statewide emissions which declines over time.

- ***Allowances.*** The California Air Resources Board (CARB) issues allowances equal to the cap, each of which is essentially a permit to emit one ton of carbon dioxide. Entities covered under the program—which include large GHG emitters such as industrial facilities, electricity generators, and gasoline suppliers—can also "trade" allowances by buying and selling them on the open market. Emitters can also purchase "offsets" which are alternative compliance instruments—similar to allowances—that are generated by undertaking certified GHG emission reduction projects from entities not covered under cap-and-trade. CARB also gives some allowances away for free.
- ***Greenhouse Gas Reduction Fund (GGRF).*** CARB hosts four auctions each year where allowances are bought and sold. Revenues from these quarterly auctions are deposited into GGRF, which the state has primarily used to fund activities intended to reduce emissions. However, because they were authorized with a two-thirds vote of the Legislature, the funds are considered tax revenues and can be used for any purpose.
- ***Annual GGRF Revenues.*** In recent years, cap-and-trade auctions have raised between $3 billion and $4.3 billion per year. Substantial uncertainty exists around how auctions will proceed from year to year, so predicting exactly how much annual GGRF will be available is difficult.

Auction Revenues Support Various Programs

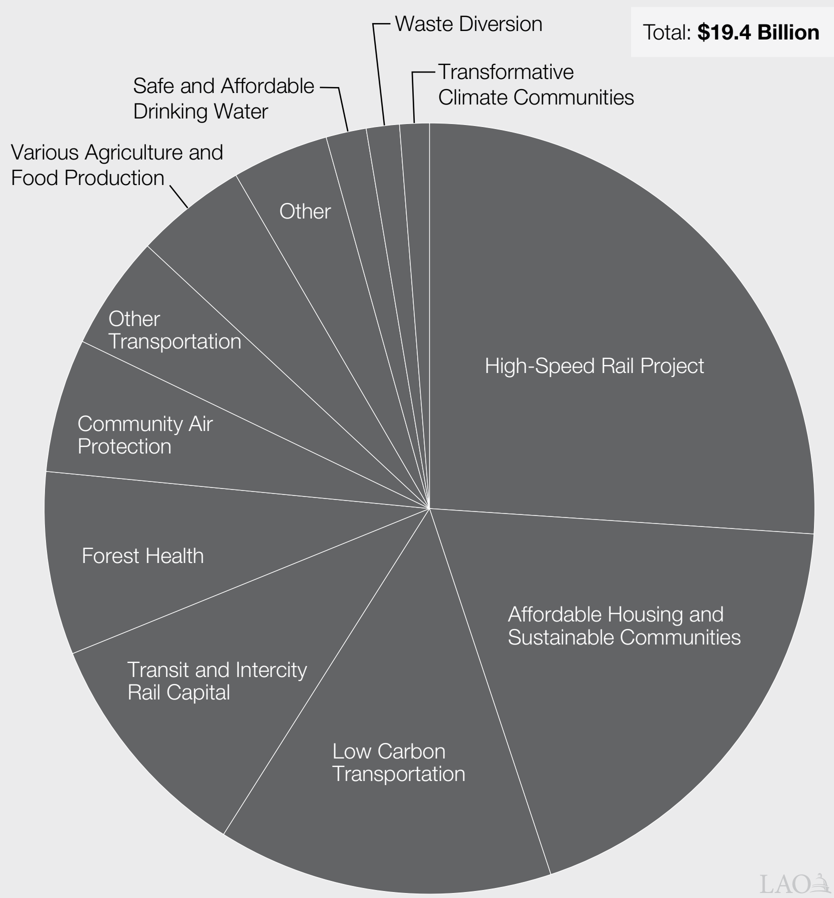
Auction revenues are intended to support activities that further the state's climate goals. Many of the GGRF-funded programs also receive funding from other sources.

- ***Continuous Appropriations.*** Under current law, a total of about 65 percent of auction revenue is continuously appropriated from GGRF to the following programs:
  - High-Speed Rail Project (25 percent).
  - Affordable Housing and Sustainable Communities Program (20 percent).
  - Transit and Intercity Rail Capital Program (10 percent).
  - Low Carbon Transit Operations (5 percent).
  - Safe and Affordable Drinking Water Program (5 percent, up to $130 million).
  - Forest Health and Wildfire Prevention Activities ($200 million). (This funding is in addition to the 65 percent and is taken "off the top" before calculating the other continuous appropriation amounts.)
- ***Discretionary Expenditures.*** The remaining revenue (about 30 percent) is available for appropriation by the Legislature for (1) state administrative costs and (2) discretionary spending programs. Discretionary spending priorities change each year, but past years have typically focused on the following areas (amounts include total funding between 2013 and 2022):
  - Low carbon transportation ($2.7 billion).
  - AB 617 Community Air Protection Program ($1.1 billion).
  - Forest health ($1.5 billion).
  - Agriculture ($411 million).
  - Organic waste diversion and recycling ($269 million).

Summary of Historical GGRF Expenditures

Cumulative Cap-and-Trade Spending by Area

2013 Through 2022



- ***Focus on GHG Mitigation.*** Most GGRF funds have been directed for programs intended to reduce GHGs. However, some expenditures, such as for forest health programs, are more focused on adapting to climate change impacts.
- ***Majority of Revenues Directed to Continuous Expenditures.*** As described, most revenues have gone towards continuous expenditures, including high-speed rail and affordable housing.

Summary of Historical GGRF Expenditures

(Continued)

- ***Large Focus on Transportation and Air Quality.*** Clean transportation programs and the AB 617 Community Air Protection Program received the largest share of revenues compared to other discretionary spending.

Cost-Effectiveness

- ***Administration Develops Estimates for GHG Reductions Resulting From GGRF Expenditures.*** State agencies—including CARB—estimate GHG emissions reductions associated with programs funded with GGRF revenues as well as the associated cost per ton of carbon reduced.
- ***Many GGRF-Funded Programs Less Cost-Effective at Reducing GHG Emissions Compared to Other State Initiatives.*** According to the administration's estimates, GGRF-funded programs vary widely in the costs associated with their emissions reductions, ranging from $9 to $164,000 per ton of carbon reduced, with most programs reducing emissions at a cost of between $150 and $2,000 per ton. In contrast, other large state initiatives tend to be more cost-effective, including cap-and-trade ($28 per ton), the low carbon fuel standard (about $70 per ton), and the renewable portfolio standard ($60 to $70 per ton according to our 2020 estimate).
- ***Emissions Reductions Likely Overstated.*** Our office and the State Auditor have raised concerns about the methodology the administration uses to estimate emissions reductions attributed to cap-and-trade-funded programs. In particular, in some cases the methodology does not account for the effects of the interaction of incentive programs, such as for clean transportation programs.
- ***Administration Estimates Certain Programs Are More Effective at Reducing Emissions.*** The administration estimates that certain large programs are more cost-effective at reducing emissions than others, including:
  - Dairy Digestor Research and Development Program ($9 per ton).
  - Sustainable Agricultural Lands Conservation Program ($10 per ton).
  - Forest Health Program ($26 per ton).
  - Food Production Investment Program ($39 per ton).

Cost Effectiveness

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- ***Additional Goals Beyond Reducing Emissions.*** Certain GGRF-funded programs also pursue other valuable legislative goals beyond just GHG reductions. For example, the AB 617 Community Air Protection Program's focus is reducing criteria air pollutants, which have harmful impacts on local communities, and in particular on disadvantaged communities. CARB estimates that disadvantaged communities have received 94 percent of benefits from this program. The administration generally does not track outcomes of programs other than GHG emissions reductions in the same comprehensive manner.

Governor's Proposals

2023-24 Governor's Budget Cap-and-Trade Spending Plan

(In Millions)

Continuous Appropriations	
High-Speed Rail Project	$526
Affordable Housing and Sustainable Communities Program	421
Transit and Intercity Rail Capital Program	210
Healthy and Resilient Forests	200
Low Carbon Transit Operations Program	105
Safe and Affordable Drinking Water Program	105
Subtotal	($1,567)
Other Existing Commitments	
Baseline Operations	$150
Manufacturing Tax Credit	97
State Responsibility Area Fee Backfill	79
Safe and Affordable Drinking Water Program Backfill	25
Subtotal	($351)
Discretionary	
General Fund Backfill—Zero Emission Vehicle Package (CEC)	$368
General Fund Backfill—Zero Emission Vehicle Package (CARB)	243
General Fund Backfill—AB 617 Community Air Protection	200
General Fund Backfill—AB 617 Local Air District Implementation	50
Subtotal	($861)
Total	**$2,779**[a]

[a] Includes $2.5 billion in auction proceeds and $300 million from: interest earnings, fund balance utilization, and additional November 2022 auction proceeds.

CEC = California Energy Commission; CARB = California Air Resources Board; and AB 617 = Chapter 136 of 2017 (AB 617, C. Garcia).

- ***Proposes $861 Million in Discretionary Spending.*** Assumes cap-and-trade revenues of $2.8 billion in 2023-24. Proposes about $1.6 billion for continuously appropriated programs, $351 million for other existing commitments, and $861 million for discretionary spending.
- ***Dedicates All Discretionary GGRF to Backfill Proposed General Fund Reductions.*** Commits (1) $611 million to backfill proposed reductions to recent zero-emission vehicle (ZEV) funding commitments and (2) $250 million to backfill proposed reduction to the AB 617 Community Air Protection Program.

Governor's Proposals

(Continued)

- ***Proposes Midyear GGRF Trigger Restoration Approach for ZEV Programs.*** Proposes budget control section language that would require the administration to allocate additional GGRF revenues the state might receive above current estimates during the 2023-24 fiscal year to backfill other proposed reductions to ZEV programs.
- ***Commits Out-Year GGRF Revenues.*** In addition to 2023-24 funds, proposes using $414 million annually in future GGRF discretionary funds to backfill proposed cuts to intended General Fund for ZEV programs in 2024-25 and 2025-26.

Issues for Legislative Consideration

- ***State Likely Will Have Additional GGRF Revenues Available.*** After accounting for the continuous appropriations and off-the-top allocations, we project the state will have a total of about $800 million available in additional discretionary GGRF revenues compared to the administration. Our estimates are higher by (1) $280 million in 2022-23 and (2) $520 million in 2023-24.
- ***May Want to Weigh Whether Continuous Appropriations Continue to Reflect Legislative Priorities.*** Most of the continuous appropriations were established as part of the 2014-15 budget and legislative priorities may have changed over the last several years.
- ***While Governor Prioritizes ZEVs, Legislature May Prefer Different Allocation of Discretionary Funds.*** The Legislature could consider a different mix of programs to fund, such as backfilling General Fund reductions for different programs than those the Governor identifies or augmenting funding for other priorities.
- ***Administration's Approach Would Significantly Limit Legislative Authority Over Midyear GGRF Revenues.*** The Legislature will want to consider (1) whether restoring funding for ZEV programs is its greatest priority for higher-than-anticipated GGRF revenues, and (2) whether it wants to grant an unprecedented level of midyear spending decisions to the administration. We recommend the Legislature reject or modify this proposed trigger approach to preserve legislative authority and flexibility.
- ***Consider the Trade-Offs Associated With Committing Out-Year GGRF.*** Committing future GGRF to backfill out-year ZEV reductions would help preserve some intended spending while helping to address projected out-year General Fund shortfalls. However, this approach would leave a lower amount of GGRF revenues available for discretionary spending—and to address potential emerging and evolving priorities—in future years.

Issues for Legislative Consideration

(Continued)

- ***Increased Clarity Around How Much Funding Remains in the GGRF Fund Balance Would Be Helpful.*** The administration is still refining its estimates for what GGRF balance would remain at the end of 2023-24 under the Governor's proposal. This information would help the Legislature better understand the potential availability of resources that could be used for additional discretionary spending. Rather than waiting for the May Revision, the Legislature may want to ask the Department of Finance to provide a more accurate estimate as soon as possible to aid in its budget deliberations.