Senate Budget and Fiscal Review—Holly J. Mitchell, Chair
SUBCOMMITTEE NO. 2 **Agenda**

Senator Bob Wieckowski, Chair
Senator Brian W. Jones
Senator Mike McGuire
Senator William W. Monning
Senator Henry I. Stern

Thursday, March 28, 2019
9:30 a.m. or upon adjournment of session
State Capitol – Room 112

Consultant: Joanne Roy

PART A

OUTCOMES

ISSUES FOR DISCUSSION

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ISSUES FOR DISCUSSION

GREENHOUSE GAS REDUCTION FUND (GGRF)

OVERVIEW

Revenue and Fund Condition. According to the Legislative Analyst's Office (LAO), the Governor's budget:

- Assumes Cap-and-Trade revenue of $2.6 billion in 2018-19 and $2.1 billion in 2019-20.
- Proposes to spend a total of $2.4 billion in 2019-20, including roughly $1.1 billion in discretionary expenditures.
- Leaves less than $100 million in the GGRF at the end of 2019-20.

On the other hand, LAO estimates revenue will be roughly $800 million higher over the two-year period and, as a result, about $450 million would remain unspent at the end of 2019-20.

There continues to be uncertainty about future revenue, making it appropriate to remain cautious when determining the overall amount of spending. However, under LAO's revenue estimates, the Legislature could spend a somewhat higher amount in the budget year—a couple hundred million dollars, for example—and still maintain a healthy fund balance.

Background. ***Cap-and-Trade Part of State's Strategy for Reducing GHGs.*** The Global Warming Solutions Act of 2006 (AB 32 (Núñez, Pavley), Chapter 488, Statutes of 2006) established the goal of limiting GHG emissions statewide to 1990 levels by 2020. Subsequently, SB 32, (Pavley), Chapter 249, Statutes of 2016, established an additional GHG target of reducing emissions by at least 40 percent below 1990 levels by 2030.

One policy the state uses to achieve these goals is cap-and-trade. The cap-and-trade regulation—administered by ARB—places a "cap" on aggregate GHG emissions from large emitters, such as large industrial facilities, electricity generators and importers, and transportation fuel suppliers. Capped sources of emissions are responsible for roughly 80 percent of the state's GHGs. To implement the program, ARB issues a limited number of allowances, and each allowance is essentially a permit to emit one ton of carbon dioxide equivalent. Entities can also "trade" (buy and sell on the open market) the allowances in order to obtain enough to cover their total emissions.

Auction Revenue Has Been Volatile in Past, but Stable Since Program Extension. About half of the allowances are allocated for free to utilities and certain industries, and most of the remaining allowances are sold by the state at quarterly auctions. The allowances offered at quarterly auctions are sold for a minimum price—set at $15.62 in 2019—which increases annually at five percent plus inflation. Revenue from the auctions is deposited in the GGRF.

Quarterly revenue has been relatively consistent, except in 2016 and early 2017 when auction revenue dropped substantially in a few auctions. This was because very few allowances offered by the state were purchased. Several factors likely contributed to this decrease in allowance purchases, including (1) an oversupply of allowances in the market because emissions were well below program caps and (2) legal uncertainty about the future of the program.

The Legislature subsequently passed AB 398 (E. Garcia), Chapter 135, Satutes of 2017, which effectively eliminated legal uncertainty about the future of the program by extending CARB's authority to continue cap-and-trade through 2030. Since then, quarterly auction revenue has consistently exceeded $600 million—reaching about $800 million in the most recent auctions.

Current Law Allocates Over 60 Percent of Annual Revenue to Certain Programs. Over the last several years, the Legislature has committed to ongoing or multiyear funding for a variety of programs, including:

- ***"Off-the-Top" Allocations to Backfill Certain Revenue Losses.*** AB 398 and subsequent legislation allocates GGRF to backfill state revenue losses from (1) expanding a manufacturing sales tax exemption and (2) suspending a fire prevention fee that was previously imposed on landowners in State Responsibility Areas (SRA fee). Under current law, both of these backfill allocations are subtracted—or taken off the top—from annual auction revenue before calculating the continuous appropriations discussed below. These allocations are roughly $100 million annually.

- ***Continuous Appropriations.*** Several programs are automatically allocated 60 percent of the remaining annual revenue. State law continuously appropriates annual revenue (minus the backfills taken off the top) as follows: (1) 25 percent for the state's high-speed rail project, (2) 20 percent for affordable housing and sustainable communities grants (with at least half of this amount for affordable housing), (3) 10 percent for intercity rail capital projects, and (4) 5 percent for low carbon transit operations.

The remaining revenues—sometimes referred to as "discretionary"—are allocated through the annual budget process, and funds generally support activities intended to facilitate GHG reductions. Historically, some of these expenditures have been allocated on a one-time basis, while other programs have been allocated funding on a multiyear basis.

The Governor's Budget Assumes $2.1 Billion of Revenue in 2019-20. The budget assumes cap-and-trade auction revenue of about $2.6 billion in 2018-19 and $2.1 billion in 2019-20. According to DOF, the 2018-19 amount continues the revenue assumption used when the budget was adopted last year. The 2019-20 amount is based on an assumption that all allowances offered by the state will sell at the minimum auction price.

The table below summarizes the Governor's proposed framework for GGRF revenue and expenditures.

Summary of GGRF Fund Condition Under Different Auction Revenue Estimates

	Governor's Estimates		LAO's Estimates	
	2018-19	2019-20	2018-19	2019-20
Beginning Balance	**$620**	**$272**	**$620**	**$518**
Revenue	**$2,675**	**$2,200**	**$3,200**	**$2,500**
Auction revenue	2,575	2,100	3,100	2,400
Investment income	100	100	100	100
Expenditures and Transfers	**$3,023**	**$2,390**	**$3,302**	**$2,569**
"Off-the-top" backfills*	71	130	71	130
Continuous appropriations	1,502	1,182	1,781	1,361
Discretionary expenditures*	1,450	1,078	1,450	1,078
End Balance	**$272**	**$82**	**$518**	**$448**

*Assumes Governor's 2019-20 spending proposals are adopted.

GGRF = Greenhouse Gas Reduction Fund.

** Source: LAO*

$2.4 Billion Expenditure Plan Spends Most of Available Funds. Based on the Governor's revenue estimates, the budget allocates a total of about $2.4 billion GGRF in 2019-20 for various programs—including off-the-top backfills, continuous appropriations, and discretionary spending. This spending comes from anticipated 2019-20 revenue, plus some unspent funds that carryover from 2018-19. Under the Governor's proposal and revenue assumptions, about $80 million would remain unallocated at end of 2019-20.

Budget Includes About $500 Million in Multiyear Discretionary Spending. Of the $1.1 billion in proposed discretionary spending in 2019-20, almost $500 million consists of multiyear discretionary spending commitments made in past years—such as the Clean Vehicle Rebate Project (CVRP) ($200 million), forest health ($165 million), prescribed fire and fuel reduction ($35 million), and administrative costs ($60 million). Most of the remaining discretionary allocations would be on a one-time basis.

Budget Bill Language Provides DOF Authority to Reduce Certain Allocations. Similar to last year's budget, the Administration proposes budget bill language (BBL) that does the following:

- Restricts certain discretionary programs from committing more than 75 percent of their allocations before the fourth auction of 2019-20.
- Gives DOF authority to reduce these discretionary allocations after the fourth auction if auction revenues are not sufficient.

In addition, DOF must notify the Joint Legislative Budget Committee (JLBC) of these changes within 30 days. This BBL is meant to ensure the fund remains solvent if revenue is lower than estimated.

The allocations that DOF could reduce include:

- Air pollution reduction (AB 617) incentives
- Heavy-duty and freight equipment programs
- Transportation equity projects
- Transformative Climate Communities Program
- Waste diversion grants and loans
- Agricultural equipment upgrades

Other discretionary programs would continue to be funded at budgeted levels under this scenario.

LAO Recommendations. ***Ensure Multiyear Discretionary Expenditures Do Not Exceed $900 Million.*** If cap-and-trade allowance prices remain near the minimum over the next few years, annual auction revenue would not support annual discretionary spending above $900 million. As a result, LAO recommends the Legislature ensure its multiyear GGRF spending commitments do not exceed about $900 million annually.

The Governor's budget includes about $500 million in multiyear discretionary GGRF spending commitments—substantially less than $900 million. However, although some of the discretionary programs are technically budgeted on a one-year basis, in some cases, these programs have received consecutive years of funding and the program activities are expected to continue into the future. For example, roughly $300 million annually has been allocated to AB 617activities in prior years and many of the activities are expected to continue. This adds a long-term cost pressure on the fund that is not reflected in the $500 million multiyear allocations in the Governor's budget.

Modify BBL to Ensure Legislative Priorities Are Funded if Revenue Is Lower Than Expected. The LAO recommends the Legislature adopt BBL that ensures the GGRF remains solvent even if revenue comes in lower than projected and that ensures funding goes to its highest priority programs under such a scenario. The Governor's proposal is a reasonable starting point for such a strategy. However, the Legislature could modify the proposed BBL in a way that maintains budgeted funding levels for a different mix of programs that are more consistent with its priorities.

In order to determine how best to modify the proposed BBL, the LAO recommends that the Legislature direct DOF to report in budget hearings on what criteria it will use to determine when revenue is insufficient and how it plans to reduce allocations to various programs under that scenario.

Based on this information, the Legislature could consider providing more specific direction to DOF. For example, for programs that would not maintain their budgeted funding levels, the Legislature could direct DOF to make proportional reductions. Another option would be for the Legislature to use funding "buckets" that designate which programs receive allocations first, and which programs receive allocations only if sufficient revenue is collected.

Issue 1: 2019-20 Cap-and-Trade Expenditure Plan

Governor's Proposal. The Governor's budget proposes a $2.4 billion expenditure plan, including over $1 billion in discretionary spending. The following table reflects the Cap-and-Trade spending plan approved in last year's budget act for 2018-19 compared to the Governor's proposed spending plan for 2019-20.

Cap-and-Trade Expenditure Plan
(In Millions)

Program	Department	2018-19	2019-20
Continuous Appropriations		**$1,502**	**$1,182**
High-speed rail	High-Speed Rail Authority	626	492
Affordable housing and sustainable communities	Strategic Growth Council	501	394
Transit and intercity rail capital	Transportation Agency	250	197
Transit operations	Caltrans	125	98
Other Existing Spending Commitments		**$109**	**$178**
SRA fee backfill	CalFire/Conservation Corps	31	87
State administrative costs	Various	38	48
Manufacturing sales tax exemption backfill	N/A	41	44
Discretionary Spending		**$1,416**	**$1,030**
Mobile Source Emissions			
Clean Vehicle Rebate Project	Air Resources Board	200	200
Heavy duty vehicle and off-road equipment programs	Air Resources Board	180	132
Low-income light duty vehicles and school buses	Air Resources Board	75	50
Low-carbon fuel production	Energy Commission	13	-
AB 617 Local Air Pollution Reduction			
Local air district programs to reduce air pollution	Air Resources Board	245	200
Local air district implementation costs	Air Resources Board	20	20
State implementation costs	Air Resources Board	15	16
Technical assistance to community groups	Air Resources Board	10	10
Agriculture			
Agricultural diesel engine replacements	Air Resources Board	112	25
Methane reductions from dairies	Food and Agriculture	99	25
Healthy Soils	Food and Agriculture	5	18
Incentives for food processors	Energy Commission	64	-
Agricultural renewable energy	Energy Commission	4	-
Forestry			
Forest health and fire prevention (SB 901)	CalFire	160	165
Prescribed fire and fuel reduction (SB 901)	CalFire	30	35
Wildfire prevention package implementation costs	CalFire and Air Resources Board	-	13
Local fire response	Office of Emergency Services	25	-
Regional forest restoration projects	Natural Resources Agency	20	-
Urban forestry	CalFire	5	-
Other programs			
Transformative Climate Communities	Strategic Growth Council	40	40
Workforce training	Workforce Development Board	-	27
Waste diversion	CalRecycle	25	25
Climate and energy research	Strategic Growth Council	18	10
Low-income weatherization	Community Services and Development	10	10
Energy Corps	Conservation Corps	6	6
Coastal adaptation	Various	5	3
Urban greening	Natural Resources Agency	20	-
Wetland restoration	Fish and Wildlife	5	-
Woodstove replacements	Air Resources Board	3	-
Technical assistance for disadvantaged communities	Strategic Growth Council	2	-
Total		**$3,027**	**$2,390**

**Source: LAO*

$2.4 Billion Spending Plan Largely Continues Funding for Existing Programs. The Governor's budget proposes a $2.4 billion 2019-20 cap-and-trade spending plan. The overall amount is about $650 million less than 2018-19, largely because estimated revenue is $475 million lower (discussed above). The large majority of funding would go to programs that the Legislature committed to funding. This includes:

- $130 million for the off-the-top revenue backfills for the AB 398 manufacturing sales tax exemption and SRA fee suspension.

- $1.2 billion for continuously appropriated programs.

- $486 million for discretionary programs where the Legislature previously indicated a commitment to providing a certain amount of funding—either in statute or in the budget.

The remaining $593 million would go to other discretionary programs—many of which received funding on a one-time basis in 2018-19. In a few instances, the budget includes funding to expand existing GGRF programs or provide funding for programs that did not previously receive GGRF. These include: (1) $27 million for a new workforce development program, (2) $18 million to expand the Healthy Soils Program, and (3) $13 million to implement various wildfire prevention bills passed in 2018.

Background. ***Use of Cap-and-Trade Auction Revenue*.** State law specifies that the auction revenues must be used to facilitate the achievement of measurable GHG emissions reductions and outlines various categories of allowable expenditures. Statute further requires DOF, in consultation with ARB and any other relevant state agency, to develop a three-year investment plan for the auction proceeds, which are deposited in the GGRF. ARB is required to develop guidance for administering agencies on reporting and quantifying methodologies for programs and projects funded through the GGRF to ensure the investments further the regulatory purposes of AB 32.

Several bills have provided legislative direction for the expenditure of cap-and-trade auction proceeds to help California achieve its climate goals and provide benefits to disadvantaged communities.

Legal Consideration of Cap-and-Trade Auction Revenues. Policy committees in both the Senate and Assembly have written about the legal constraints of spending GGRF moneys for various purposes; those constraints include Proposition 13 (1978), Proposition 26 (2010), and the Third District Court of Appeal decision in *California Chamber of Commerce v. State Air Resources Bd*., the latter of which is the current controlling determination.

The Third District Court of Appeal opinion held "that the auction sales do not equate to a tax" explaining that "the hallmarks of a tax are: 1) that it is compulsory; and 2) that the payor receives nothing of particular value for payment of the tax, that is, the payor receives nothing of specific value for the tax itself. Contrary to plaintiffs' view, the purchase of allowances is a voluntary decision driven by business judgments as to whether it is more beneficial to the company to make the purchase than to reduce emissions …these twin aspects of the auction system, voluntary participation and purchase of a specific thing of value, preclude a finding that the auction system has the hallmarks of a tax."

The appellate court also found that "the purchase of emissions allowances, whether directly from the Board at auction or on the secondary market, is a business driven decision, not a governmentally compelled decision [and] unlike any other tax … the purchase of an emissions allowance conveys a valuable property interest—the privilege to pollute California's air—that may be freely sold or traded on the secondary market."

As a result, the appellate court found that "the Sinclair Paint test is not applicable [to the cap-and-trade program], because the auction system is unlike other governmental charges that may raise the "tax or fee" question resolved thereby. The system is the voluntary purchase of a valuable commodity and not a tax under any test."

Legislative Counsel Opinions. In a written opinion on March 20, 2018, Legislative Counsel opined on the lawful appropriation of GGRF moneys in light of the recently approved AB 398 (E. Garcia, Chapter 135, Statutes of 2017). Legislative Counsel determined that AB 398 satisfied two parts of the three part "benefit or privilege exemption" test to determine whether a charge is a fee or a tax (a fee requires a lower vote threshold to pass and puts a special trust on the money, which then cannot be used for general fund purposes). In determining that AB 398 passed the first two parts of the test, Legislative Counsel wrote, "because the payment of the cost to purchase an emissions allowance confers a valuable property interest that consists of the privilege to pollute air, we conclude that the cap-and-trade charge is imposed for the granting of a privilege and therefore satisfies," part one of the test and part two is satisfied because, "under the cap-and-trade program, the privilege of being a large emitter of GHGs 'is not provided to those not charged.'"

As for whether the requirement that a charge not exceed the reasonable costs to the state of granting the privilege to the payer, Legislative Counsel wrote, "in determining whether a charge was imposed for revenue purposes, courts generally look to the authorized uses of those funds. In particular, the generation of general fund revenue signals that a charge was imposed for revenue purposes and is therefore a tax … we note that a portion of the revenue from the auction of emission allowances [under AB 398] is required to be transferred from [GGRF] to the General Fund on an annual basis … in addition, the transfers from the GGRF to the General Fund must be made in amounts identical to the amount of revenue loss to the state attributable to the tax exemptions provided or extended by AB 398, some of which do not bear a reasonable relationship to reducing GHG … accordingly, it is our opinion that AB 398 imposed a tax pursuant to article XIIIA, section 3."

As for the nature of cap-and-trade auction revenues, Legislative counsel wrote, "In the context of AB 398, it is our view that the Legislature changed the character of the cap-and-trade charge from a fee to a tax by granting new authority for the cap-and-trade charge and changing the purposes for which the revenue from the charge may be appropriated to incorporate General Fund expenditures. Moreover, because the bill received a two-thirds vote in each house of the Legislature, it is a validly enacted tax.

As for when the conversion from special fund to general fund moneys occurs, Legislative Counsel wrote, "by granting new authority for the charge for the period of January 1, 2021, through December 31, 2030 … [and] because this new authority does not commence until January 1, 2021 … it is our opinion that *the operative date of the tax imposed by AB 398 is January 1, 2021*, when the regulations that make programmatic changes to the cap-and-trade program become operative." *(Emphasis added.)*

With regard to revenues raised prior to January 1, 2021, Legislative Counsel determined, "that the *revenue generated by the cap-and-trade charge before January 1, 2021,* is special fund revenue that *may be expended only for purposes that reasonably relate to the reduction of GHG emissions.* On and after January 1, 2021, the revenue generated by the cap-and-trade charge constitutes General Fund revenue that may be appropriated for any lawful purpose." *(Emphasis added.)*

LAO Assessment. ***Revenue Likely Somewhat Higher Than Budget Assumes . . .*** The LAO estimates auction revenue will be about $3.1 billion in 2018-19 and $2.4 billion in 2019-20—or about $800 million higher over the two-year period. LAO's estimates assume that almost all allowances sell at the minimum auction price—consistent with recent market trends. Although the Administration indicates that it makes a similar assumption in 2019-20, LAO's estimates are about $300 million higher in that year. The difference is primarily because LAO estimates that about 16 million more allowances will be offered during the budget year based on updated estimates of available allowances.

. . . But Revenue Uncertainty Continues. There are a wide variety of factors that contribute to revenue uncertainty. Revenue is primarily driven by demand for allowances and market prices. The overall demand for allowances and prices will depend on economic conditions, technological advancements, future regulatory actions, and market expectations about these various factors. All of these factors are highly uncertain and, as a result, revenue could be higher or lower than LAO's projections. For example, revenue could be lower if companies do not purchase all of the allowances offered at auctions. There will be more allowances available than companies need in order to comply with the regulation in the next few years. As a result, if a sufficient number of businesses do not want to purchase and hold onto allowances for future years (also known as "banking"), then some of the allowances offered in the near term might not be purchased. On the other hand, if businesses anticipate that prices will rise substantially in the future, this could increase demand for allowances and increase near-term prices. This could increase revenue substantially.

Revenue Likely Could Support Somewhat Higher Spending, but Reasons to Be Cautious. The LAO estimates the Governor's spending plan would leave about $450 million in the fund at the end of 2019-20. Given the revenue uncertainty discussed above, LAO thinks the Legislature should be cautious when adopting a GGRF spending plan. However, based on LAO's revenue projections, the Legislature could allocate some additional funds in 2019-20, while still leaving a healthy fund balance. For example, under LAO's revenue assumptions, the Legislature could allocate an additional $200 million while also leaving about $250 million in the fund for future years. This fund balance would be about 25 percent of annual discretionary revenue. As a percentage of annual revenue, the fund balance is higher than many other state funds, which is prudent given the revenue uncertainty. The Legislature will also want to consider the amount of revenue that will be available in future years when adopting its spending plan, particularly multiyear funding proposals.

Future Discretionary Revenue Might Not Exceed $900 Million Annually. If nearly all allowances continue to sell at the floor price, revenue over the next few years will be roughly $2.4 billion annually. After allocating funds for the off-the-top backfills and continuous appropriations, about $900 million annually would be left for discretionary programs. The Governor's budget includes about $500 million in multiyear discretionary spending.

Details of BBL Important, Particularly if Legislature Allocates More Money. If 2019-20 auction revenues are not sufficient to cover budget allocations, the Governor's proposed BBL would give DOF authority to reduce allocations for certain programs, while maintaining budgeted funding levels for other programs. This effectively prioritizes funding for certain programs over other programs if revenue is lower than expected. In concept, the BBL is a reasonable way to ensure the fund remains solvent. Such a strategy is particularly important if the Legislature allocates substantially more money than the Governor is proposing. However, the Legislature will want to adopt language that ensures that funding for its highest priority programs are prioritized if revenue comes in lower than projected.

Some of the specific details of how DOF will implement the BBL are unclear at the time of this report. For example, the BBL does not specify (1) what criteria DOF will use to determine whether there is insufficient revenue to cover the proposed allocations, or (2) how it would reduce funding for the remaining programs that are not guaranteed to maintain their budgeted funding level.

LAO Comments. ***Legislative Direction on GGRF Spending.*** Various statutes enacted over the last several years direct the use of cap-and-trade auction revenue. For example:

- Auction revenues must be used to further the purposes of AB 32 and facilitate GHG emission reductions.

- At least 35 percent must be spent on projects that benefits disadvantaged communities and/or low-income households. The California Environmental Protection Agency identifies disadvantaged communities based on various factors related to environmental quality and socio-economic characteristics.

- Roughly 60 percent of annual revenue is continuously appropriated to certain programs.

- AB 398 and subsequent legislation allocated funds to backfill revenue losses from expanding a manufacturing sales tax exemption and suspending the SRA fee.

- AB 398 also expressed the Legislature's intent that GGRF be used for a variety of priorities, including reducing toxic and criteria air pollutants, low carbon transportation alternatives, sustainable agriculture, healthy forests, reducing short-lived climate pollutants, climate adaptation, and clean energy research.

Healthy Soils Program Expansion Consistent With Natural and Working Lands Plan. SB 1386 (Wolk), Chapter 545, Statutes of 2016, identified the protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals. Natural and working lands include forests, wetlands, parks, agricultural lands, and rangelands. SB 1386 also directed state agencies to consider carbon sequestration when establishing regulations and financial assistance to promote protection and management of natural and working lands. In addition, the 2017 Scoping Plan—in which ARB identifies the mix of policies that will be used to achieve the state's GHG reduction goals—established a goal to reduce GHG emissions from natural and working lands by at least 15 million metric tons of carbon dioxide equivalent by 2030. Subsequently, ARB worked with other state agencies to release a draft Natural and Working Lands Climate Change Implementation Plan in January 2019. The plan includes a variety of conservation and management goals intended to increase the amount of carbon sequestered in plants and soil, such as increasing the use of agricultural management practices that increase soil carbon on at least 42,000 acres each year. These management practices include (1) applying compost, (2) cover cropping, (3) no-till farming, and (4) mulching. For context, there are about 25 million acres of agricultural land in California.

The budget proposes $18 million on a one-time basis for the Healthy Soils Program. This is $13 million more than what was provided in 2018-19. The Healthy Soils Program funds incentives and demonstration projects for agricultural management practices that have potential to increase carbon sequestration and productivity. So far, most of this funding has gone to encourage compost application and cover cropping. Based on the average costs of incentives provided in past years, the Administration estimates that about $18 million would be needed to encourage these alternative management practices on about 42,000 acres.

Basic Information About Expected Projects and Outcomes Still Lacking. As shown in the table below, the Administration has provided limited quantitative information about what outcomes it expects to accomplish with the proposed funding amounts. The table below focuses on new discretionary spending proposals. The amount of information varies by program. Some departments have provided estimates of the number of projects that would be funded and estimated outcomes—such as GHG reductions—from those projects. The Administration has not provided quantitative information for other programs.

Selected New 2019-20 Spending Proposals— Number of Projects and Outcomes

Program	Expected Projects and/or Outcomes
AB 617 incentives	Not available.
Heavy-duty vehicle and off-road equipment programs	Not available.
Low-income light-duty vehicles and school buses	Not available.
Transformative Climate Communities	Community-proposed projects that reduce an estimated 40,000 tons of CO2e.
Workforce development	Add a total of 5,000 pre-apprenticeship slots in construction or other jobs in climate-impacted industries over a five-year period.
Agricultural diesel engine replacements	Not available.
Methane reductions from dairies	5 to 7 dairy digester projects to reduce an estimated total of 100,000 to 140,000 tons of carbon dioxide equivalent per year; 6 to 11 alternative manure management projects that reduce an estimated total of 15,000 to 27,500 tons of CO2e per year.
Waste diversion	Not available.
Healthy Soils	18,750 to 22,500 acres of agricultural land managed to sequester carbon to reduce an estimated 38,000 to 47,000 tons of CO2e per year.
Climate and energy research	Not available.
Low-income weatherization	Not available.

CO2e = carbon dioxide equivalent.

**Source: LAO*

In some cases, departments provided an explanation for why they were unable to provide this information. For example, ARB indicated that the number of projects, and associated emission reductions, from its heavy-duty and freight programs depend on future ARB decisions about how it will allocate the funds between different subprograms (vouchers, demonstrations, and pilots). Also, ARB indicates that it does not have complete information about how past funding allocated to local air districts has been used, making it difficult to produce estimates for future spending. In other cases, departments did not provide an explanation for why it could not provide information on expected outcomes.

The lack of information about expected outcomes limits the Legislature's ability to evaluate the merits of each program, making it more difficult to ensure funds are allocated in a way that is consistent with its priorities and achieves its goals most effectively. By not having this information before programs are implemented, it also limits the Legislature's ability to hold departments accountable when evaluating the performance of these programs after they are implemented.

Program Adjustments Will Likely Be Needed Under Proposed Funding Amounts. Some departments will likely have to adjust the current structure of their programs to stay within their proposed budget allocations. For example, the budget proposes $132 million for ARB's heavy-duty vehicle and freight programs, which is $48 million less than what was provided in the current year. ARB's current heavy-duty incentive programs include vouchers for commercially available vehicles, as well as pilot and demonstration programs for technologies that are still being developed and tested. Under the proposed lower levels of funding, ARB will likely have to reprioritize funding among incentives, pilots, and demonstrations.

Also, the budget includes $200 million to ARB for the CVRP, which provides rebates for battery electric, plug-in hybrid, and hydrogen fuel cell vehicles. This amount is consistent with last year's budget agreement to provide $200 million annually to CVRP. However, ARB projects that $210 million to $280 million would be needed to meet demand for CVRP vehicle rebates in 2019-20. As a result, ARB might have to adjust the structure of the program in order to remain within the proposed funding amount. For example, it might have to reduce the amount of rebates or change the individuals or vehicles that are eligible for rebates. For both heavy-duty incentives and CVRP, ARB plans to use a public process over the next several months to determine how to prioritize these incentive funds and make necessary programmatic changes.

LAO Recommendations. The LAO recommends the Legislature ensure multiyear discretionary spending commitments do not exceed $900 million annually—the maximum amount that could be supported by future revenue if recent trends in allowance prices continue. The LAO also recommends the Legislature modify the proposed budget bill language to ensure the Legislature's highest priorities are funded if revenue falls below projections.

The LAO recommends the Legislature direct the Administration to report on the following information at budget hearings:

- Expected outcomes that will be achieved with the proposed funding;

- Any programmatic adjustments to existing programs that might be needed in order to stay within their proposed allocations;

- Additional information on the proposal to expand workforce apprenticeship programs, including key outcomes of the apprenticeship programs and how it will ensure participants are connected to career jobs; and,

- Additional information about the new worker transition pilot, including how the California Workforce Development Board (CWDB) plans to expand the program in the first several years and whether $5 million is the correct funding level during this initial ramp-up.

Based on this information, the LAO recommends the Legislature allocate funds based on its highest priorities.

Direct Administration to Provide Additional Information on Spending Proposals. The LAO recommends the Legislature direct the Administration to report on the following information at spring budget hearings:

- ***Expected Outcomes.*** The LAO recommends the Legislature direct the Administration to report on key metrics and outcomes it expects to achieve with new proposed discretionary spending. This information could help the Legislature evaluate the merits of these proposals and, in the future, hold departments accountable by comparing the projected outcomes to the actual outcomes achieved. The LAO recognizes that it may be difficult for some departments to accurately predict some of the key outcomes at this point. However, in LAO's view, even basic information—such as the expected number of different projects funded—could provide the Legislature with helpful information as it weighs its different GGRF spending priorities. If the Administration is unable to provide such information for certain programs, the Legislature could consider adjusting allocations to those programs downward accordingly.

- ***Necessary Funding Adjustments.*** The LAO recommends the Legislature direct the Administration to report on key adjustments to existing programs it is considering in 2019-20. For example, how will ARB prioritize funding between heavy-duty vehicle vouchers, pilots, and demonstrations? How will ARB adjust the CVRP program to ensure spending does not exceed the proposed budget? Based on this information, the Legislature could consider providing more specific direction on these program changes to ensure they are consistent with legislative priorities, or adjusting funding amounts provided to different programs.

Allocate Funds According to Legislative Priorities. When allocating funds among different programs, the LAO recommends the Legislature first consider its highest priorities. These priorities could include such things as GHG reductions, improved local air quality, forest health and fire prevention, and climate adaptation. Once the Legislature has identified it priorities, it can then attempt to allocate the funds to the programs that achieve those goals most effectively.

For example, to the extent the Legislature considers GHG emission reductions the highest priority use of the funds, the Legislature will want to allocate funding to programs that achieve the greatest GHG reductions. As the LAO has discussed in previous reports, determining which programs achieve the greatest amount of net GHG reductions is challenging for a variety of reasons. For example, many of the spending programs interact with other regulatory programs in ways that make it complicated to evaluate the net GHG effects of any one program. However, even with this uncertainty, the Legislature might want to consider focusing on spending strategies that are generally more likely to reduce emissions in a cost-effective way. This includes focusing on reductions from sources of emissions that are not subject to the cap-and-trade regulation and targeting other “market failures” that are not addressed by carbon pricing, such as expanding research and development activities.

In addition, since California represents only about one percent of global GHG emissions, some of the most significant impacts California programs will have on global GHGs could depend on the degree to which state programs influence the adoption of policies and programs in other parts of the country and world. As a result, the Legislature might want to evaluate each program, in part, based on its assessment of its potential effects on actions elsewhere. For example, state programs that effectively serve as policy demonstrations for other jurisdictions and programs that promote advancements in GHG-reducing technologies that can be used in other jurisdictions are likely to have a more substantial effect on GHG emissions.

Staff Recommendation. Hold open.

Issue 2: Cap-and-Trade Expenditure Plan: Workforce Development Training & Apprenticeships

Governor's Proposal. The Governor' budget proposes 11 positions and $27 million in 2019-20 and 2020-21, and $25.5 million in 2021-22, 2022-23, and 2023-24 GGRF to develop, administer, and fund a suite of policy and program investments that increase access to jobs for disadvantaged populations and help workers, companies, and communities build partnerships, skills training, and, in some cases, restructure work related to reducing greenhouse gas emissions.

Component	2019-20	2020-21	2021-22	2022-23	2023-24	Total
High Road Construction Careers	$10 Million	$10 Million	$10 Million	$10 Million	$10 Million	**$50 Million**
High Road Training Partnerships	$10 Million	$10 Million	$10 Million	$10 Million	$10 Million	**$50 Million**
California Worker Transition	$5 Million	$5 Million	$5 Million	$5 Million	$5 Million	**$25 Million**
Workgroup, Administration and Technical Support	$2 Million	$2 Million	$500,000	$500,000	$500,000	**$5.5 Million**
	$27 Million	**$27 Million**	**$25.5 Million**	**$25.5 Million**	**$25.5 Million**	**$130.5 Million**

Background. ***$27 Million for New Workforce Training Programs.*** The Cap-and-Trade spending plan provides $27 million in 2019-20—and similar amounts annually for the following four years—to CWDB to expand two existing pre-apprenticeship projects and to start a new worker transition initiative. Consistent with statewide workforce training policy, these pre-apprenticeship slots would be prioritized for disadvantaged job seekers. Disadvantaged workers are individuals with barriers to employment, including low-skill, low-wage workers, the long-term unemployed, and members of single-parent households. Specifically, the plan would fund the following programs:

- ***High Road Construction Careers (HRCC).*** Provides $10 million annually for five years to add a total of 3,000 pre-apprenticeship slots within the existing HRCC project. The HRCC project funds pre-apprenticeship slots that prepare disadvantaged workers for apprenticeship programs in construction and the building trades. Apprenticeships are paid on-the-job training programs that are intended to lead to careers in the building trades.

- ***High Road Training Partnership (HRTP).*** Provides $10 million annually for five years to expand the training partnership by adding a total of 2,000 pre-apprenticeship slots. The HRTP is a pre-apprenticeship demonstration project for nonconstruction industries that have been affected by the state's efforts to reduce GHGs. The Administration indicates that these industries include healthcare, manufacturing, public transit, water, and utilities. One example of an HRTP project is an apprenticeship that trains bus service technicians (who clean buses and do light maintenance) to become electric bus mechanics.

- ***Worker Transition Fund Initiative Pilot.*** The plan would also provide $5 million annually for five years to pilot a new worker transition initiative and begin a "Workgroup on the Future of Work." Through the Worker Transition Fund, the state would provide income support, retraining, and, in some cases, relocation assistance to workers in industries—such as oil, gas, and nuclear power—that have been affected by technology and the state's efforts to reduce

GHGs. The pilot phase would commence in one or two regions after the completion of a labor market study and community assessment. Additionally, the Workgroup on the Future of Work would be tasked with assessing how GHG reduction policies impact the labor market and making recommendations to address how automation, artificial intelligence, and other technological changes affect the state's labor markets.

LAO Comments. ***Apprenticeship Programs Focus on Access to Careers Rather Than Reductions in GHG Emissions.*** The Governor's proposal to expand workforce training programs would expand the number of pre-apprenticeship slots intended to lead to new careers in construction. It would also expand the number of nonconstruction training programs that teach existing staff new skills that could be used to meet to the state's efforts to reduce GHGs. Due to this focus, and unlike most programs that are funded in the expenditure plan, the workforce proposals would not likely have the effect of reducing GHG emissions directly. That said, the proposal's focus on access to career jobs for disadvantaged workers is generally consistent with other legislative direction regarding workforce development and climate policy. For example, AB 398 requires CWDB to report to the Legislature on the need for increased education, job training, and workforce development resources to help transition to economic and labor-market changes related to statewide GHG goals. According to CWDB, this report is expected to be finalized soon and the budget proposal is consistent with the findings of the report.

Some additional information about the existing pre-apprenticeship programs could be helpful for the Legislature as it evaluates the merits of this proposal. For example, it is unclear what key outcomes the programs have achieved, such as the number of trainees enrolled, trained, and hired into careers. In addition, it is currently unclear (1) how much funding might be needed to ensure there is an adequately trained workforce in light of changes caused by the state's climate policies and (2) whether there is adequate capacity within communities to expand the apprenticeship programs in the budget year consistent with the amount being proposed. The apprenticeship programs are administered by local partnerships—typically community-based organizations—and it might be a challenge to build the capacity to substantially expand the number of those partnerships in the budget year.

Five-Year Funding for Worker Transition Pilot Could Be Premature. The CWDB is developing its plan for the worker transition initiative pilot. Based on the LAO's understanding of the pilot, funding would initially be used to identify potential sites and partner organizations, after which a labor market study would be prepared for each site. The pilot project would begin in selected sites after the completion of the study component. As such, it may be several years before the pilot begins. It is also unclear whether $5 million is the right level at which to fund the pilot, since the sites have not yet been identified and the study has not been completed. Given that the pilot may not begin for one or more years, funding the pilot with $5 million annually for five years could be premature.

Direct Administration to Provide Additional Information on Spending Proposals. The LAO recommends the Legislature direct the Administration to report on the following information at spring budget hearings:

- ***Expanding Apprenticeship Programs.*** The LAO recommends that the Legislature require the CWDB to report at budget hearings on the key outcomes of the HRCC and HRTP programs to date. Key outcomes include the number of trainees enrolled, trained, and hired into careers. The Legislature may also wish to ask the CWDB about the challenges it expects to face in regard to local capacity to expand these programs. Additionally, the Legislature should ask the CWDB how it plans to ensure that (1) apprenticeship and pre-apprenticeship participants represent disadvantaged communities, (2) participants are connected to career jobs in construction and other fields following training, and (3) regular updates regarding the outcomes of these efforts are provided to the Legislature.

- ***Worker Transition Pilot.*** Given the preliminary nature of the worker transition fund initiative, the LAO recommends that the Legislature seek additional information about how the CWDB plans to move forward with the pilot and whether it will be able to expend the $5 million annually, especially in the first several years. If the Legislature wishes to move forward with the pilot project, it may want to consider funding a lower amount for planning efforts for the pilot over the next one or two years so that it can maintain closer oversight. Once presented with the results of the labor market study and the community assessments, the Legislature could determine the right level of funding to begin the pilot. The LAO also encourages the Legislature to seek additional details about how the pilot fits within the CWDB's vision for the state's workforce goals as efforts to reduce GHGs continue, and the overall state needs. Finally, the LAO would suggest that the Legislature require the CWDB to provide an update annually on the planning, progress, and results of the pilot at budget hearings in future years.

Staff Recommendation. Reject without prejudice.