AGENDA

ASSEMBLY BUDGET COMMITTEE NO. 3 RESOURCES AND TRANSPORTATION

ASSEMBLYMEMBER RICHARD BLOOM, CHAIR

WEDNESDAY, APRIL 20

9:00 A.M. - STATE CAPITOL, ROOM 447

VOTE-ONLY CALENDAR

ITEM	DESCRIPTION	
3900	**AIR RESOURCES BOARD**	**2**
ISSUE 1	AIR QUALITY IMPROVEMENT PROGRAM AUGMENTATION	2
ISSUE 2	REALIGN DISTRIBUTED ADMINISTRATION	2
ISSUE 3	REFRIGERANT MANAGEMENT PROGRAM	2
ISSUE 4	IMPLEMENTATION OF METHANE MEASUREMENTS (AB 1496)	3
3900 **3980**	**AIR RESOURCES BOARD** **OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT**	**3**
ISSUE 5	COST OF IMPLEMENTATION ACCOUNT PROPOSALS	3

ITEMS TO BE HEARD

VOTE-ONLY

3900 AIR RESOURCES BOARD

VOTE-ONLY ISSUE 1: AIR QUALITY IMPROVEMENT PROGRAM AUGMENTATION

The Governor's Budget requests an increase in the Air Quality Improvement Program annual expenditure authority from $24.2 million to $31.7 million to align with the average annual revenue of $30.0 million for this program. The Air Quality Improvement Program funds air quality improvement projects related to fuel and vehicle technologies to reduce criteria pollutant, air toxic, and greenhouse gas emissions. For some programs, the Air Quality Improvement Program is the only source of State funding (such as for the Truck Loan Assistance Program, a first come/first serve program that provides financing opportunities for California truckers using the leveraging power of loan guarantees). As demand for the program has increased, and new Air Quality Improvement Program programs (such as those designed to accelerate the deployment of clean agricultural tractors and equipment that are planned for regions of the State that do not meet ambient air quality standards) are launched, demand for program funding exceeds current budget levels.

VOTE-ONLY ISSUE 2: REALIGN DISTRIBUTED ADMINISTRATION

The Governor's Budget requests a technical adjustment to increase the Administration and Distributed Administration program authority in the amount of $29.4 million. There are no positions or additional resources being requested with this proposal. This revision will reflect Administration and Distributed Administration program authority of $48 million and will align with administrative operating costs for the Chairman's Office, Executive Office, Office of Information Technology, and the Administrative Services Division.

VOTE-ONLY ISSUE 3: REFRIGERANT MANAGEMENT PROGRAM - TECHNICAL ADJUSTMENT

The Governor's Budget requests a net zero redirection of $695,000 per year collected from facilities subject to annual implementation fees under the AB 32 Refrigerant Management Program to fund four existing positions that are meeting the implementation needs of the Refrigerant Management Program and currently funded under the Cost of Implementation Account to the Air Pollution Control Fund. In addition, the proposal requests a net zero redirection of $180,000 in contract funding for continued maintenance and support of the Refrigerant Registration and Reporting System.

VOTE-ONLY ISSUE 4: IMPLEMENTATION OF METHANE MEASUREMENTS (AB 1496)

The Governor's Budget requests $580,000 for four new permanent positions, $790,000 in annual contract funding, and $60,000 for a one time equipment funding (Cost of Implementation Account) to implement AB 1496 (Thurmond), Chapter 604, Statutes of 2015, to carry out measurements of high-emission methane "hot spots" and conduct life-cycle greenhouse gas emission analysis in the natural gas sector.

Funded work would include monitoring and measuring high emission methane "hot spots" in California using aerial surveys and ground-based measurements in consultation with local air districts that monitor methane.

Staff Recommendation: Approve as Budgeted Issue 1-4

3900 AIR RESOURCES BOARD
3980 OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT (OEHHA)

VOTE-ONLY ISSUE 5: COST OF IMPLEMENTATION ACCOUNT PROPOSALS

AB 32, the California Global Warming Solutions Act of 2006, authorized the Air Resources Board to adopt a schedule of fees to be paid by sources of GHG emissions. These fees are used to fund costs directly related to state agencies' development, administration, and implementation of AB 32 programs that reduce GHG emissions. The Governor's Budget requests the following proposals funded through the Cost of Implementation Account (COIA).

Low-Carbon Transportation Fuels (AB 692)	The ARB requests $145,000 annually for 1.0 permanent full-time Air Resources Engineer position to provide consultation and analytical support to the Department of General Services and other State agencies for implementation of AB 692 (Quirk), Chapter 588, Statutes of 2015. The additional staff person would assist the Department of General Services in substantiating the availability and prices of very low carbon fuels, provide advice on purchasing decisions based on manufacturer capacity and logistics, verify the carbon intensity claims for fuels offered to the Department of General Services and other State agencies, and provide analytical support to the Low Carbon Fuel Standard program needed to address the expected increased demand for approval of pathway carbon intensity values for very low carbon fuels, including new and emerging fuels, to meet the requirements of AB 692.
Refrigerant Management Program	The ARB requests a net zero redirection of $695,000 per year collected from facilities subject to annual implementation fees under the AB 32 Refrigerant Management Program to fund 4.0 existing positions that are meeting the implementation needs of the Refrigerant Management Program and

	currently funded under the Cost of Implementation Account to the Air Pollution Control Fund.
Implementation of Methane Measurements (AB 1496)	The ARB requests $580,000 for 4.0 new permanent full-time positions, $790,000 in annual contract funding, and $60,000 for a one time equipment funding to meet the legislative requirements of AB 1496 (Thurmond), Chapter 604, Statutes of 2015, to carry out measurements of high-emission methane "hot spots" and conduct life-cycle greenhouse gas emission analysis in the natural gas sector.
Greenhouse Gas Limits Study	OEHHA requests 3.0 permanent full-time positions and $200,000 per year in annual contracts for a total of $645,000 annually. These resources will be used to analyze the benefits and impacts in disadvantaged communities of greenhouse gas (GHG) emission limits. More specifically, Governor Brown has issued a directive to the California Environmental Protection Agency for OEHHA to prepare a report analyzing the benefits and impacts in disadvantaged communities of the GHG limits. The initial report is due December 1, 2016, and must be updated at least every three years. This will be a new activity for OEHHA.

Staff Recommendation: Approve as Budgeted

ITEMS TO BE HEARD

0521 TRANSPORTATION AGENCY
0540 NATURAL RESOURCES AGENCY
0650 OFFICE OF PLANNING AND RESEARCH
2640 STATE TRANSIT ASSISTANCE
2660 CALTRANS
2665 HIGH SPEED RAIL AUTHORITY
3340 CALIFORNIA CONSERVATION CORPS
3540 DEPARTMENT OF FORESTRY AND FIRE
3600 DEPARTMENT OF FISH AND WILDLIFE
3860 DEPARTMENT OF WATER RESOURCES
3900 AIR RESOURCES BOARD
3970 DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY
4700 DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT
6440UNIVERSITY OF CALIFORNIA
6610 CALIFORNIA STATE UNIVERSITY
7760 DEPARTMENT OF GENERAL SERVICES
8570 DEPARTMENT OF FOOD AND AGRICULTURE

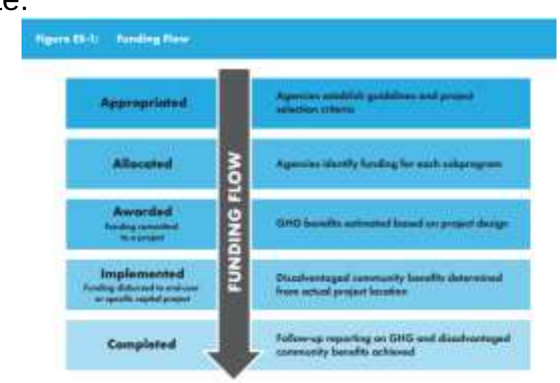
ISSUE 1: 2016 CAP AND TRADE ANNUAL REPORT

The Subcommittee will hear a presentation of the 2016 Cap and Trade Annual Report

BACKGROUND

Assembly Bill 1532 (Pérez, Chapter 807, Statutes of 2012) requires the Department of Finance (Finance) to submit an annual report to the Legislature on the status and outcomes of projects funded from the GGRF. This 2016 Annual Report describes the status of funded programs and lists the projects funded. It also provides estimates of the GHG reductions expected from project investments and provides key statistics on benefits to disadvantaged communities, demand for funding, and leveraging. The report provides fiscal data as of November 1, 2015, and program accomplishments through December 2015.

The report included the following chart to outline the various stages of funding appropriated to date:



The following table, from the report details the funding to date:

Table ES-1: Appropriations for California Climate Investments FY 2013-14 through 2015-16

Administering Agency	Program	FY Appropriation ($M)			Total ($M)
		2013-14	2014-15	2015-16	
CALIFORNIA High-Speed Rail Authority	High Speed Rail Project	$0	$250	$600	$850[1]
CalSTA California State Transportation Agency	Transit and Intercity Rail Capital Program (TIRCP)	$0	$25	$240	$265
Caltrans	Low Carbon Transit Operations Program (LCTOP)	$0	$25	$120	$145
California Strategic Growth Council	Affordable Housing and Sustainable Communities (AHSC)	$0	$130	$480	$610
California Environmental Protection Agency Air Resources Board	Low Carbon Transportation (LCT)	$30	$200	$95	$325
CSD	Low-Income Weatherization Program (LIWP)	$0	$75	$79	$154
Pending[2]	Energy Efficiency for Public Buildings	$0	$20	$0	$20
cdfa California Department of Food & Agriculture	Climate Smart Agriculture	$10	$25	$40	$75
	Water Energy Efficiency	$30	$20	$20	$70
	Wetlands and Watershed Restoration	$0	$25	$2	$27
CAL FIRE	Sustainable Forests	$0	$42	$0	$42
CalRecycle	Waste Diversion	$0	$25	$6	$31
Total Appropriations		**$70**	**$862**	**$1,682**	**$2,614**

According the report, the $865 million of awarded funds to date are expected to reduce the equivalent of over 14 million metric tons of Carbon Dioxide Emissions:

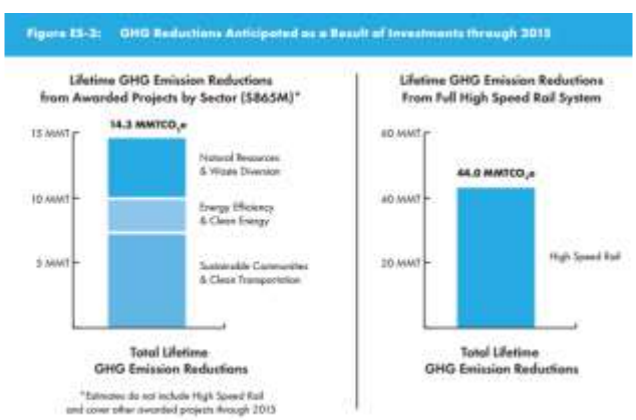
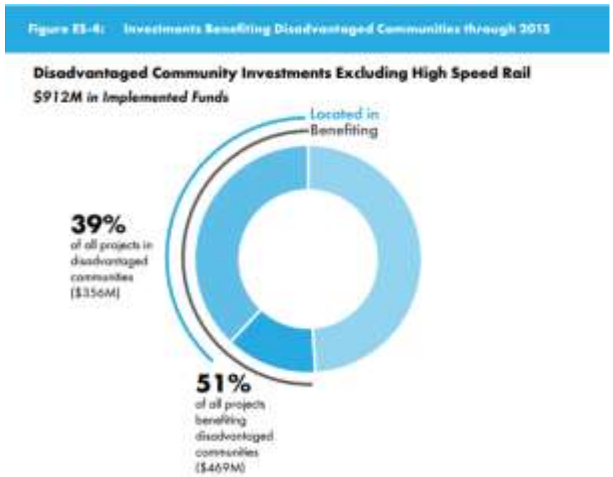


Figure ES-2: GHG Reductions Anticipated as a Result of Investments through 2015

In addition, the report estimates that over 50 percent of all funding (excluding High Speed Rail) have benefited disadvantaged communities:



LAO COMMENTS

The LAO had the following comment regarding the report:

The administration's 2016 cap-and-trade spending report represents a step forward by providing the Legislature with consolidated information about spending and greenhouse gas (GHG) reduction estimates for most programs. Based on the estimates that are included in the report, the cost-effectiveness varies widely among programs, but many programs appear to be relatively costly methods of reducing GHGs. However, we advise the Legislature to exercise caution when using these estimates to make future funding decisions because (1) estimates of co-benefits are not included in the report and (2) we have some concerns about some of the methods that are used to estimate GHG reductions. Consequently, we continue to recommend the Legislature consider the following: (1) the long-term benefits of cap-and-trade spending versus reliance on other policies, including the cap-and-trade regulation, in achieving state GHG reduction goals, and (2) opportunities to improve the amount and quality of information provided to the Legislature to help inform future decisions.

STAFF COMMENTS

The recently released Annual Report introduces how Cap and Trade funds have been used, and how they contribute to the fight against climate change. However, these are just one of several strategies the state is undertaking to meet AB 32 goals for to reduce emissions to the 1990 levels by 2020.

The chart below, prepared by LAO, outlines the overall strategies to reduce emissions.

Regulations	MMTCO2E Reduction
Cap–and–trade	23
Low carbon fuel standard	15
Energy efficiency and conservation	12
33 percent renewable portfolio standard	12
Refrigerant tracking, reporting, and repair deposit program	5
Advanced clean cars	3
Reductions in vehicle miles traveled (SB 375)	3
Landfill methane control	2
Other regulations	5
Total	**78**

MMTCO2E = million metric tons of carbon dioxide equivalent.

Note that the reductions attributed to Cap and Trade in this chart are due to the enforcement mechanism itself, not the investments made with the funds. Therefore, some of the reductions projected because of the investment will be in addition to the amounts above. However, as the LAO noted, some of the investments benefit emitters under the cap, which may not ultimately reduce overall emissions.

Staff Recommendation: Informational Item, No Action

ISSUE 2: 2016-17 CAP AND TRADE FUNDING PROPOSAL

The Subcommittee will hear a presentation of the 2016 Cap and Trade Annual Report.

BACKGROUND

The Governor has proposed a $3.1 billion plan that reflects a wide range of programs. The chart below, prepared by the LAO, details the proposed expenditures by program area:

Governor's 2016-17 Cap-and-Trade Expenditure Plan

(In Millions)

Continuous Appropriations[a]	**$1,200**
High speed rail	500
Affordable housing and sustainable communities	400
State transit assistance	200
Transit and intercity rail capital	100
Transportation	**1,025**
Low carbon vehicles	460
Transit and intercity rail capital	400
Low carbon road program	100
Biofuel production subsidies	40
Biofuel facilities capital support	25
Carbon Sequestration	**280**
Healthy forests	150
Wetland and watershed restoration	60
Urban forestry	30
Green infrastructure	20
Carbon sequestration in soils	20
Energy Efficiency and Renewable Energy	**200**
Low-income energy efficiency and solar	75
UC and CSU energy efficiency	60
Energy efficiency for state buildings	30
I-Bank energy financing program	20
Conservation Corps energy efficiency	15
Short-Lived Climate Pollutants	**195**
Waste diversion	100
Wood stove replacement	40
Dairy digesters	35
Refrigeration unit replacements	20
Local Climate Program	**100**
Water Efficiency	**90**
Water efficiency technology	30
Agricultural water efficiency	20
Rebates for efficient clothes washers	15
Low-income household water efficiency upgrades	15
Commercial and institutional water efficiency	10
Total	**$3,090**

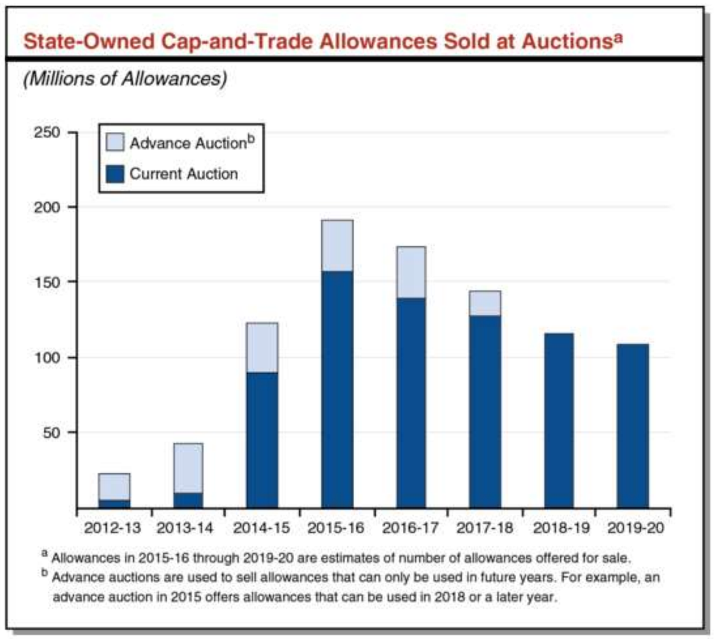
[a] Continuous appropriations based on Governor's $2 billion revenue estimate.
GHG = Greenhouse gas; CSU = California State University; and UC = University of California.

How much do we have to spend?

The Governor's proposal chooses to spend $1.1 billion one-time Cap and Trade funds in 2016-17 which would likely result in a much smaller Cap and Trade package in future years, especially for the 40 percent discretionary programs.

The LAO estimates slightly higher Cap and Trade revenues in 2016-17 than assumed in the Governor's budget. However, 2015-16 is the "peak" year for the sale of allowances which generate Cap and Trade funding. In future years, Cap and Trade revenues could decline, assuming the allowances continue to sell close to the price floor, as they have to date.

State-Owned Cap-and-Trade Allowances Sold at Auctions



The LAO was asked to produce the following projection of revenues based upon auction prices that is similar to historic levels. The chart below illustrates the projected revenue by year:

Cap-and-Trade Revenue	
(In Billions)	
2015-16	2.5
2016-17	2.4
2017-18	2.1
2018-19	1.8
2019-20	1.8
*Assumes future prices are slightly higher than minimum prices, which is generally consistent with past results.	

This estimate is slightly higher than LAO's projections that assume future auctions are at the auction floor price.

While overall revenues look robust, the interaction of the continuous appropriation reduces the amount of funding available. Assuming adoption of the Governor's plan the amount available for discretionary programs would fall by more than 50 percent in the 2017-18:

Cap and Trade Revenues	Revenue	Continuously Appropriated	Total Discretionary	Reserve
2015-16	2.5	1.5	**0.25**	1.6
2016-17	2.4	1.44	**1.89**	0.67
2017-18	2.1	1.26	**0.84**	0.67
2018-19	1.8	1.08	**0.72**	0.67
2019-20	1.8	1.08	**0.72**	0.67

The Governor's budget proposal infers that all of the investments proposed outside of the continuous appropriation are "one-time", however the expectations among stakeholders does not echo this view.

An Example of What 2017-18 Could Look Like:

For illustration purposes, the chart below depicts a theoretical 2017-18 budget plan the mirrors the "barebones" Cap and Trade package adopted in 2015-16, plus the ongoing funding assumed in the Transportation funding plan:

Discretionary Cap and Trade Programs	2016-17	2017-18
Low Carbon Vehicles--Clean Rebates	230	230
Low Carbon Vehicles- EFMP Plus	30	30
Low Carbon Vehicles- Other	200	200
Transit and Intercity Rail Capital	400	
Low Carbon Road	100	100
Biofuels Production Subsidies	40	
Biofuels Facilities Capital Support	25	
Healthy Forests	150	
Wetland and Watershed Restoration	60	
Urban Forestry	30	
Green Infrastructure	20	
Carbon Sequestration in Soils	20	
Low Income Energy Efficiency and Solar	75	75
UC and CSU Energy Efficiency	60	
Energy Efficiency for State Buildings	30	
I Bank Energy Financing	20	
Conservation Corp Energy Efficiency	15	
Waste Diversion	100	
Wood Stove Replacement	40	
Dairy Digesters	35	
Refrigeration Unit Replacements	20	
Local Climate Program	100	
Water Efficiency Technology	30	30
Agricultural Water Efficiency	20	20
Rebates for Efficient Cloth Washers	15	
Low-Income Household Water Efficiency Upgrades	15	
Commercial and Institutional Water Efficiency	10	
Total Discretionary Cap and Trade	**1,890**	**685**
Remaining Revenue 2017-18		155

In 2017-18, the Legislature would have $155 million available to consider extending $1.2 billion of programmatic spending in the prior year. This theoretic exercise illustrates that most of the one-time money proposed this year is truly one-time.

Given this dynamic, the Subcommittee may wish to consider if some of the Governor's proposals make sense as a one-time investment. Will a one-time biofuels production subsidy make a meaningful difference to the fuels in the long run? Would it be worth creating a new wood smoke program for one year of funding?

In addition, the theoretical example illustrates that the large number of natural resources programs—forestry, wetland restoration, healthy soils, urban greening—would have difficulty continuing beyond 2017. Other priorities that were in the Assembly's 2015 plan, like active transportation, bus passes, bio-solids, organics, and dairy digesters, and other programs would have to an uphill fight for consideration for funding in future years.

As an alternative, the Subcommittee could adopt $1 billion of the discretionary programs in 2016-17 and allow the remaining funds to remain in the fund balance for future years. Such an approach would provide enough funding to maintain the same level of funding for these programs for three consecutive years.

LAO COMMENTS

The LAO produced a report that discusses the expenditure of Cap and Trade funds. This report made the following observations regarding the use of Cap and Trade funding under the existing fee mechanism in place:

Spend in Uncapped Sector to Achieve Net GHG Reductions. The ARB projects that existing regulations will encourage enough emission reductions - from capped and uncapped sources - to meet the state's overall 2020 GHG target. To the extent additional GHG reductions are a priority, the Legislature could target funds to achieve GHG emission reductions from uncapped sources. As discussed above, spending on emission reductions from uncapped sources would likely result in net emission reductions. In addition, there is limited legal risk associated with this option because the funds would be targeted to GHG reductions that would not otherwise occur. To ensure funds are being used to maximize emission reductions, the Legislature should target funds to projects and programs with the greatest emission reduction per dollar spent.

Target Spending to Reduce Overall Costs. To the extent reducing the overall costs of emission reduction activities is a priority, the Legislature could target spending to cost–effective emission reduction activities that cap–and–trade and other existing regulations and programs do not already encourage. For example, cap–and–trade might not provide adequate incentive in the private sector for research and development activities on GHG–reducing technologies because the benefits of such activities can "spill over" to other companies that can profit by implementing developments made by others in their own products. As a result, private companies do not always invest in research and development activities at a level that is socially optimal. Thus, there could be a rationale for providing some state funding in this area.

Using auction revenue to encourage more cost–effective emission reductions should be based on an analysis of (1) gaps in other regulations and programs and (2) how state funds can be best targeted to address these gaps. State law currently requires the administration to provide such an analysis as part of its Three–Year Investment Plan. However, in our view, the administration's analysis to date has been lacking. The administration's draft investment plan released in December 2015 provides limited data or analysis that can be used to identify gaps in existing programs and regulations, the extent to which additional state funding is needed, or how funding could be targeted to address these gaps in a cost–effective manner.

The Legislature could consider requiring the administration to provide a more robust analysis of the ways in which existing regulations and programs do not provide adequate incentive for consumers and businesses to make cost–effective reductions. Such an analysis can be difficult because it relies on a strong understanding of complex economic market conditions that exist for different types of emissions. To help ensure a robust analysis, the Legislature could require the administration to establish an expert panel of economists and other outside experts to provide guidance on identifying market conditions in which current federal and state programs fail to provide adequate incentives for energy technologies. This information could then be used to: (1) target auction revenues to programs that best address these market conditions and (2) direct state agencies to evaluate project applicants based on their ability to address these market conditions.

Prioritize Other Legislative Goals. If the priority is to address other climate–related goals, the Legislature may want to consider directing the administration to give greater weight to some of these other benefits when allocating funds. For example, GHG reductions are one of the primary evaluation criteria used to evaluate Transit and Intercity Rail Capital Program applications. Benefits to disadvantaged communities, such as reduced air pollution, are a secondary evaluation criteria. The Legislature could direct state agencies to give greater weight to other goals when evaluating applications for funding, such as air quality or preparing for the effects of climate change in disadvantaged communities. The Legislature would have to balance the potential benefits of achieving greater non–GHG benefits against the potential greater legal risk of targeting the money less towards GHG reductions.

Offset Other Types of State Spending to Enable Greater Budget Flexibility. If the priority is to achieve greater flexibility, the Legislature could use auction revenue to offset spending from other sources of state funds, including special funds and the General Fund, that are currently being used for GHG reduction–related activities. Using revenues to offset other state spending could free up state funds to be used for other legislative priorities, which could include reducing fees or taxes. For example, the Legislature could consider using the additional revenue to offset special fund spending on certain climate related activities, such as the Alternative and Renewable Fuels and Vehicle Technology Program. Similarly, using auction revenue to offset General Fund spending on activities such as energy conservation activities in state buildings would make additional General Fund dollars available for other legislative priorities. The current amount of potential General Fund offsets is unclear. Our past efforts have found limited General Fund expenditures on activities that reduce GHGs.

STAFF COMMENTS

Cap and Trade revenue is a byproduct of pollution. Every $1 of Cap and Trade Revenue represents equivalence of the CO2 output of driving a car over 180 miles. The bountiful fund balance of the Greenhouse Reduction Fund has provided a source of resources that could enable a wide world of possible innovations and future policy for the State of California. Nevertheless, this fund balance is not a windfall, it is the result of a massive amount of pollution, equal to the emissions of a car making 95 round trips between the Sun and Pluto.

Several stakeholders have suggested that the State should frame its plan should by a singular purpose or priority. Such an approach would allow for the evaluation of various programs on the same criteria. For example, the State could adopt a Cap and Trade approach based upon one of the following principles:

- Leverage the highest benefit-cost reduction of carbon through expenditures.
- Enable transformative technology change for long-term carbon reduction, similar to the success of California emissions standards.
- Achieve meaningful community co-benefits from Cap and Trade investments.
- Reduce as much carbon in the near term as possible.
- Restrict investments to entities that are not subject to the emissions cap.
- Offset General Fund costs with Cap and Trade Revenue.
- Address Environmental Justice issues with Cap and Trade funding.

While such a singular approach would simplify the approach for creating an ongoing program, it seems unrealistic that the State's approach to fighting climate change could become a one-dimensional discussion. Instead, the Subcommittee must consider all of these perspectives while constructing the Assembly plan, as the Assembly represents stakeholders that have each of these priorities.

The Administration's Cap and Trade plan does a good job balancing the many different perspectives. It has something for everyone, although maybe some of the programs may benefit from more discussion. However, as noted earlier, there is not sufficient funding to continue this approach in future years.

Since Cap and Trade funds are derived from pollution allowances, the Subcommittee may also want to consider how to avoid future pressure to generate additional Cap and Trade revenue by either allowing more pollution (so we can sell allowances) or driving up the price of pollution for the purpose of revenue generation.

Thus, the Subcommittee may wish to consider the following two questions in creating a Cap and Trade Plan:

- How much Cap and Trade funding should be funded in 2016-17?
- What types of programs should be funded?

Staff recommends the Subcommittee consider these questions as the Assembly attempts to frame its approach for the 2016 budget process. The Subcommittee may wish to consider rejecting the administration's Cap and Trade proposal in its entirety, without prejudice, so that the Assembly can begin the process of crafting such a plan from the ground up.

However, the State has already made policy choices that have implied long-term commitments and have shaped the planning of stakeholders, including local governments and industries. Maintaining these programs should be the highest priority in the short run, given these prior actions. Therefore, the continuously appropriated programs should be maintained without change in the budget year.

Furthermore, Staff recommends the Subcommittee take action to fund the Clean Vehicle Rebate Program, which is only partially funded in 2015-16 and is accumulating a backlog of rebates until additional funding is appropriated. Such an action would reduce the uncertainty for this existing program and allow the State to continue its leadership in this important effort.

Staff Recommendation: Hold Open

3900 AIR RESOURCES BOARD

The Governor's budget proposes $945 million for ARB in 2016–17, a net increase of $391 million (71 percent) compared to estimated expenditures in the current year. This year–over–year increase is largely the result of additional cap–and–trade expenditures for low carbon transportation programs to reduce GHGs.

ISSUE 3: PROPOSALS TO ACHIEVE POST-2020 GHG GOALS

LAO ANALYSIS AND RECOMMENDATIONS

The LAO provided a thorough analysis and recommendation for the following three budget proposals.

The Governor's budget includes a total of $3.2 million and 13 permanent positions to implement three proposals related to the Clean Truck and Bus standards, the Advanced Clean Cars program, and the short-live climate pollutant (SLCP) strategy. Figure 22 provides a summary of the three requests, including the funding and positions requested and ARB's primary justification for the requests based on their budget proposals and our conversations with board staff. The additional resources would be used for the following activities:

- ***Clean Truck and Bus Standards.*** *Develop more stringent GHG and criteria pollutant standards for trucks and buses, as well as improve compliance monitoring for existing standards. For example, of the resources requested, two positions and $490,000 are requested to develop more stringent GHG standards to achieve the Governor's long–term GHG goals.*
- ***Advanced Clean Cars Program.*** *Develop regulations to increase the number of zero–emission vehicles and reduce criteria pollutants and GHGs from light duty vehicles.*
- ***SLCP Strategy.*** *Develop and implement policies to reduce methane and fluorinated gases, improve monitoring of fluorinated gases, and improve enforcement of existing and near–term SLCP strategies.*

Figure 22
Summary of Governor's Proposals to Develop Regulations for Post–2020 GHG Goals

Proposal	***Funding and Positions Requested***	***Primary Justification***
Clean Bus and Truck Standards	*$1.2 million and four positions*	*Governor's GHG goals, AB 32, and federal air standards*
Advanced Clean Cars Program	*$580,000 and four positions*	*Governor's GHG goals and federal air standards*
SLCP (SB 605)	*$1.4 million and five positions*	*SLCP strategy, AB 32, and Governor's GHG goals*

GHG = greenhouse gas and SLCP = short–lived climate pollutant.

All of these activities would be funded from the COIA, which is supported by a regulatory fee paid by certain GHG emitters. The account generally supports administrative activities performed by state agencies related to GHG emission reductions. The board might have to increase the fee to pay for the additional costs associated with these proposals. (The fee is currently set at about 15 cents per metric ton of carbon dioxide equivalent.)

Certain Activities Do Not Appear Consistent With Current Statutory Direction. *Assembly Bill 32 states that the 2020 GHG limit shall remain in effect unless otherwise amended or repealed. However, as shown in Figure 22, the Governor's more stringent 2030 and 2050 GHG targets are identified as a justification for parts of each request. Although the Legislature has adopted major policies intended to achieve substantial GHG reductions beyond 2020—such as establishing a 50 percent renewable portfolio standard and doubling energy efficiency savings in electricity and natural gas by 2030—we are not aware of any statutory direction for ARB to develop regulations to achieve more stringent post–2020 GHG targets.*

Furthermore, the ARB indicates that resources are needed to develop new SLCP regulations identified in the SLCP strategy to achieve the intent of the legislation. Although SB 605 directs the administration to develop a strategy to reduce SLCPs, it does not direct the administration to implement the measures contained in the strategy (such as by developing regulations). Therefore, it is unclear whether the proposed activities to develop new regulations are consistent with statutory direction.

Resources to Develop Certain New Regulations Are Premature. *Even if the Legislature determines that it would like to adopt the more stringent post–2020 GHG targets, the budget requests to develop specific regulations to achieve such targets are premature until more analysis has been done. As discussed above, the administration is developing a Scoping Plan to identify a cost–effective mix of policies that could be used to achieve the 2030 GHG target. However, a draft Scoping Plan has not been released. It is unclear whether the specific regulations identified in these proposals will be part of the final Scoping Plan. Thus, we find that it is premature to provide resources to develop these specific regulations.*

Unclear Whether COIA Is an Appropriate Fund Source for Non–GHG Activities. *All activities in these requests are funded from the COIA. However, it is unclear whether using the funds to support regulatory activities specifically intended to achieve federal air quality standards, but not GHG reductions, is an appropriate use of the funds.*

LAO Recommendations*. We recommend modifying the Governor's proposal in two ways: (1) rejecting requests related to the administration's long–term GHG* *goals and implementing the SLCP strategy and (2) identifying alternative funding sources for air quality activities.*

Reject Requests Related to Long–Term GHG Goals and Implementing SLPC Strategy. *We recommend rejecting the proposed positions and funding intended to develop regulations to achieve the Governor's long–term GHG goals and implement the SLCP strategy. These activities appear to be inconsistent with current statutory direction and are premature. Specifically, we recommend reducing the Clean Bus and Truck proposal by the two positions and $490,000 identified by the administration as being related to long–term GHG goals. With respect to the Advanced Clean Cars request and the SB 605 request, the administration did not provide a breakdown of the positions and funding related primarily to the Governor's post–2020 GHG targets and implementing the SLCP strategy. Therefore, we recommend the Legislature direct the administration to provide this information at budget hearings so that similar adjustments can be made.*

Identify Alternative Funding Sources for Air Quality Activities. *We further recommend that the Legislature direct the administration to identify an alternate fund source for activities specifically related to achieving federal air quality standards.*

ARB Response to LAO Comments and Recommendations.

ARB believes it has statutory authority to carry out the work identified in the Short-Lived Climate Pollutants (SLCP), Advanced Clean Cars (ACC) and Clean Trucks and Buses budget change proposals (BCPs). AB 32 requires ARB to adopt rules and regulations to achieve the maximum technologically feasible and cost effective greenhouse gas emission reductions. While 2020 is an important first step in measuring progress, AB 32 recognizes that climate change will not end in 2020 and mandates that ARB maintain and continue emission reductions beyond 2020. The activities supported by these BCPs will help to maintain the 2020 target as California's population and economy grows after 2020, and they will also help California further reduce emissions below 2020 levels.

ARB's SLCP BCP focuses on resources to better assess and control emissions of fluorinated gases (F gases) and methane. Both sets of gases have relatively short atmospheric lifetimes but are powerful climate forcers that may imperil progress under AB 32. F-gas emissions are projected to grow rapidly through 2030. Similarly, current projections indicate methane, an especially potent greenhouse gas, will not decline in the absence of successful methane control measures. If ARB does not take near term action to stop F-gas and methane emissions growth, it will be increasingly difficult to maintain the 2020 greenhouse gas limit, much less continue progress. ARB's ACC BCP requests positions to work on vehicle technology assessments, zero emission vehicle (ZEV) market assessments, ZEV consumer outreach and out-of-state partnerships, and ZEV *infrastructure assessments. These activities are important for maintaining the 2020 greenhouse gas limit and continuing greenhouse gas reductions into the future, given the expected increase in California's population and vehicle ownership. ARB's Clean Trucks and Buses BCP requests resources to support greenhouse gas standards and associated regulations to control emissions from heavy duty trucks. The standards for heavy duty trucks and trailers would increase in stringency through model year 2027 and therefore will also help in maintaining and continuing emission reductions, as required under AB 32.*

All three ARB BCPs are proposed for funding through the Cost of Implementation Account (COIA), which is an appropriate use of funds. The requests support regulatory activities to carry out the purposes of AB 32, in line with the COIA statutory guidance in Health and Safety Code Section 38597. There are co-benefits associated for reducing criteria pollutant emissions, which are necessary to support attainment of the federal health based ozone and particulate matter standards, but the BCPs focus on greenhouse gas reductions. Achieving greenhouse gas reductions and federal air quality standards by transitioning to zero and near zero vehicles will require an integrated planning effort that focuses on greenhouse gases, criteria pollutants, and toxic air contaminants together. Furthermore, reducing criteria pollutants to achieve federal clean air standards increasingly relies on the same technologies as are necessary to reduce greenhouse gas emissions. For these reasons, COIA is appropriate. Nevertheless, the Motor Vehicle Account may also be an appropriate fund source for some of this work, but has major cost pressures.

STAFF COMMENTS

The LAO raises numerous concerns with these proposals. Fundamentally, ARB believes they have clear authority to pursue post-2020 GHG reductions. However, there is concern that the ARB may be pushing the bounds. LAO points out:

"Although the Legislature has adopted major policies intended to achieve substantial GHG reductions beyond 2020—such as establishing a 50 percent renewable portfolio standard and doubling energy efficiency savings in electricity and natural gas by 2030—we are not aware of any statutory direction for ARB to develop regulations to achieve more stringent post–2020 GHG targets."

LAO maintains that some of the activities in these proposal appear to be inconsistent with current statutory direction and are premature. However, ARB argues that if it does not take near term action to stop F-gas and methane emissions growth, it will be increasingly difficult to maintain the 2020 greenhouse gas limit, much less continue progress.

LAO further raises concern about the appropriateness of using COIA for activities that are specifically targeted to reducing non-GHG pollutants. This concern mostly applies to clean car and bus and truck standards that limit criteria or toxic pollutants (rather than GHGs). The Subcommittee may wish to engage with the ARB and the LAO about these issues and ask whether they anticipate needing a fee increase to pay for the additional costs associated with these proposals.

Staff Recommendation: Hold Open

ISSUE 4: LOW CARBON TRANSPORTATION FUELS

The Governor's Budget requests one permanent position and $145,000 (Cost of Implementation Account) annually to support additional workload related to AB 692 (Quirk), Chapter 588, Statutes of 2016. The ARB indicates that the additional position would assist with the following tasks:

- Develop and maintain knowledge on market dynamics affecting the availability and price of very low carbon fuels and provide consultation to DGS.
- Support DGS and other state agencies in identifying sources of very low carbon transportation fuels.
- Provide analytical support to evaluate the carbon intensity of new very low carbon fuels expected to enter the market as a result of AB 692.

The Governor’s budget does not propose any resources for DGS to implement AB 692.

BACKGROUND

AB 692 requires, beginning January 1, 2017, that at least 3 percent of the transportation fuel purchased by the state be procured from very low carbon transportation fuel sources. This percentage increases by 1 percentage point each year thereafter until 2024. Very low carbon transportation fuel has no more than 40 percent of the carbon intensity of the closest comparable petroleum fuel for that year, as measured by the methodology for the low carbon fuel standard (LCFS). (The LCFS is a regulatory program administered by ARB.) The legislation requires the Department of General Services (DGS) to coordinate with state agencies that are buyers of transportation fuel and submit an annual progress report to the Legislature.

LAO COMMENTS

Insufficient Workload Justification at This Time. *In the short run, the additional workload for ARB to implement AB 692 appears minor and absorbable. The board has been implementing the LCFS for several years and approves dozens of carbon intensity pathways for low carbon fuels in the state each year. Based on our conversations with DGS, it has already identified a likely supplier for the fuel needed to meet the 2017 purchasing requirement. Therefore, it is unclear why there would be significant additional workload for ARB. In the long run, there could be additional workload associated with identifying additional fuel sources or approving additional fuel pathways. However, the additional workload is uncertain at this time and, therefore, the request for additional resources is premature.*

Recommend Rejecting Proposal. *We recommend that the Legislature reject the proposed position and $145,000 to implement AB 692 because there is insufficient workload justification at this time.*

ARB Response to LAO Comments and Recommendations.

ARB disagrees with LAO's assessment that the additional workload for ARB to implement AB 692 is minor and absorbable. ARB has unique knowledge of the suppliers, available volumes, and carbon intensity values for all motor vehicle fuels sold in California. Because of this knowledge and the confidential nature of much of this information, it is expected that the Department of General Services and other State agencies will consult with ARB. In fact, the Department of General Services has already asked ARB to provide information to fleet managers, provide technical support with greenhouse gas calculations, and respond to questions regarding compatibility of fuels and infrastructure requirements. In addition, all producers of transportation fuels sold in California must register with ARB and have the carbon intensity of the fuel approved for use under the Low Carbon Fuel Standard regulation. Because AB 692 is expected to increase the demand for low carbon fuels consumed by State agencies, new producers and technologies may enter the market, and ARB would need to process new fuel pathways to determine the carbon intensity of these fuels and ensure they meet the AB 692 threshold. As AB 692 is implemented, it will be important to look at multiple fuel suppliers to ensure the best outcome for the State, in terms of both cost and environmental benefits. Lastly, the need for a broad look at potential suppliers will be ongoing, as new fuels enter the market and become more competitive. ARB assistance in this effort will be vital.

STAFF COMMENTS

Staff agrees with the LAO that the workload for ARB to implement AB 692 appears minor and absorbable. LAO states:

The board has been implementing the LCFS for several years and approves dozens of carbon intensity pathways for low carbon fuels in the state each year. Based on our conversations with DGS, it has already identified a likely supplier for the fuel needed to meet the 2017 purchasing requirement. Therefore, it is unclear why there would be significant additional workload for ARB.

While in the long run there could be additional workload associated with identifying additional fuel sources or approving additional fuel pathways, the additional workload is uncertain at this time. Staff agrees with the LAO that the request for additional resources is premature.

Staff Recommendation: Reject proposal

ISSUE 5: SB 350 IMPLEMENTATION

The Governor's Budget requests three permanent positions and $485,000 (Cost of Implementation Account) to implement SB 350 (de Leon), Chapter 547, Statutes of 2015. These positions are:

- One position to develop and conduct a study on barriers for low–income customers to access zero–emission and near–zero–emission transportation options by January 1, 2017.
- One position to help analyze electric vehicle charging infrastructure needs to support the California Public Utilities Commission (CPUC) approval of Investor Owned Utility (IOU) programs and investments.
- One position to consult with CPUC and California Energy Commission (CEC) on setting GHG targets for utilities as part of the integrated resource planning process and monitor potential effects on the cap–and–trade market.

The Governor's budget also includes resources for CEC and CPUC to implement various provisions of SB 350.

BACKGROUND

SB 350 expands the existing renewable portfolio standard (RPS) to 50 percent by 2030 and establishes a state goal of doubling the amount of energy efficiency savings by 2030. In addition, the bill directs the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and ARB to undertake various activities related to resource planning and transportation electrification. Specifically, the legislation requires:

- CPUC and CEC to adopt processes for investor–owned utilities (IOUs) and publicly owned utilities to file integrated resource plans to ensure utilities are meeting RPS requirements, helping the state meet its GHG targets, minimizing costs for ratepayers, and ensuring system reliability.
- CPUC, in consultation with ARB and CEC, to direct IOUs to propose multiyear programs and investments to accelerate widespread transportation electrification, such as funding electric vehicle charging infrastructure.
- ARB and CPUC to identify strategies to promote transportation electrification.
- ARB to develop and publish a study on barriers for low–income customers to zero–emission and near–zero–emission transportation options.

LAO COMMENTS

Ongoing Resources Not Justified. *The workload associated with conducting a study on barriers for low–income customers to zero–emission transportation options is one time and does not justify ongoing resources. State law requires ARB to complete this study by January 1, 2017. The ARB indicates that there is ongoing workload because this study will be the first step in developing a* *guidance document and lead to future research in this area. However, SB 350 does not direct the ARB to conduct these ongoing activities.*

Recommendation. *We recommend the Legislature convert $162,000 in funding related to studying barriers for low–income customers to access zero–emission transportation options from ongoing to one year. We have no concerns with the other requests for positions and funding that are part of this proposal.*

ARB Response to LAO Comments and Recommendations.

Studying the barriers that low-income communities face in accessing zero and near zero emission transportation options and making recommendations to overcome these barriers will result in a guidance document or road map for low income communities and policy makers throughout California. Zero and near-zero emission technologies are relatively new and are not available on a large-scale basis in low income communities. Thus, information is limited and will not satisfy the broad goal and intent of SB 350. Given the short timeframe for completing the study under the bill (January 1, 2017) and the lack of available resources, the first phase of the study will focus on currently available information, specifically a literature review of existing research on related topics and other local and state projects geared toward increasing access to zero and near zero emission transportation options. In addition, ARB will begin to work with stakeholders to explore issues related to community need, accessibility, convenience, reliability, affordability, and the need for education, outreach, and investment. However, this study will provide only a cursory evaluation of the barriers. The longer term study (beyond January 1, 2017) funded under the BCP will provide a deeper understanding of these issues, as well as issues related to public health and safety, options for financing, and access to technology. It will also allow consideration of results from an ARB funded research project that includes evaluation of the most effective forms of incentives to encourage low income consumers to adopt zero or near zero emission transportation options, as well as the barriers they currently face in adopting these technologies. The results of this research study are expected in mid 2018. This ongoing work is needed to fully assess the barriers and make meaningful recommendations. ARB expects to update the study and recommendations as the market evolves and new information becomes available. This effort will require more staff resources than a one-year, limited-term position can provide.

STAFF COMMENTS

Staff concurs with the LAO's assessment that the workload associated with conducting a study on barriers for low–income customers to zero–emission transportation options is one time and does not justify ongoing resources.

Staff Recommendation: Convert $162,000 in funding related to studying barriers for low–income customers to access zero–emission transportation options from ongoing to one year. Approve the remainder of the proposal as proposed.

ISSUE 6: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AND THE REGIONAL CLEAN AIR INCENTIVES MARKET PROGRAM (RECLAIM)

BACKGROUND

On March 15, 2016, the U.S. Environmental Protection Agency (EPA) ruled that recent regulations adopted by the South Coast Air Quality Management District (SCAQMD) fail to meet federal clean air standards. It ordered the ARB and SCAQMD to submit new regulations within one year.

The SCAQMD regulations in question relate to pollution from stationary sources such as refineries and cement plants. Specifically, the SCAQMD was considering regulations that establish a new cap for their regional NOx and Sox cap-and-trade program called RECLAIM. NOx and Sox are a precursor to smog and fine particulate matter. The district staff had proposed that the limit be reduced by 14 tons per day over the next seven years. In early February, the SCAQMD opted to reduce the cap by 12 tons per day. This lower reduction will likely result in the SCAQMD continuing to be out of compliance for state and federal smog standards.

If left uncorrected, the violations could potentially endanger hundreds of millions of dollars in federal transportation funds which are contingent upon compliance with the Clean Air Act. Failure to comply could also result in a federal takeover of the air district, which would require ceding local control entirely.

The South Coast air district, which encompasses Los Angeles, Orange, Riverside and San Bernardino counties, is among the most polluted in the nation. Currently, the South Coast Air Basin is considered an extreme ozone nonattainment area. The Los Angeles-Long Beach Metro area ranks worst in the nation for ozone and 5th in the nation for particle pollution, according to the American Lung Association.

According to the most recent calculations from the ARB, exposure to current levels of particulate matter (PM 2.5) is responsible for an estimated 4,300 cardiopulmonary related deaths per year in the South Coast Air Basin.

ARB is responsible for ensuring that the regulations meet federal and state standards. ARB sent a letter on 1/7/2016 to the SCAQMD warning the district that the smaller NOx reduction falls short of what is needed to meet state and federal air quality standards. Additionally, the RECLAIM program under the new cap would NOT achieve as much reductions as traditional regulations, which is a requirement under the Health and Safety Code.

STAFF COMMENTS

The Subcommittee may wish to ask the Board for an update on this situation and what it is doing to ensure that the District complies with Clean Air Act.

Informational Item

ISSUE 7: SUSTAINABLE FREIGHT ACTION PLAN IMPLEMENTATION (SFL)

The Governor's Spring Finance Letter requests $1.3 million for eight positions and $200,000 per year in contract funds from the Motor Vehicle Account for Sustainable Freight.

Governor Brown's Executive Order B-32-15 directs the development and implementation of the California Sustainable Freight Action Plan to begin transforming the state's freight transport system to one powered with zero and near-zero emission equipment. This proposal requests the resources needed to implement activities required as a result of the Executive Order. This includes staff to: negotiate, develop, and implement Sustainable Freight measures; complete other Sustainable Freight activities and deliverables outlined in the Executive Order; certify new engines/technology in support of Sustainable Freight; and contract funds for economic data gathering and modeling.

BACKGROUND

The ships, harbor craft, trucks, locomotives, cargo equipment, aircraft, and other equipment that move freight to, from, and throughout California are significant contributors of fine particulate matter, black carbon/diesel soot, and greenhouse gas emissions, as well as the nitrogen oxides that form ozone. These emissions are a public health concern at both regional and community levels and contribute to global warming. Work has been done to reduce emissions from these individual pieces of equipment. However, the emissions from operations at major freight facilities still pose unacceptable health risks and must be further reduced to protect nearby communities.

ARB's 'Sustainable Freight Pathways to Zero and Near-Zero Emissions' Discussion Document outlines ARB's vision for a clean freight system, together with the immediate and near-term measures necessary to support use of zero and near-zero emission technology. On July 17, 2015, Governor Brown issued Executive Order B-32-15, which directs state agencies to develop an integrated action plan by July 2016. The California Sustainable Freight Action Plan will establish clear targets to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system. It must also identify state policies, programs, and investments to achieve these targets.

STAFF COMMENTS

New health science tells us that infants and children are 1.5 to 3 times more sensitive to harmful effects of exposure to air toxics, like those emitted from freight equipment, than we previously understood. This heightens the need for further risk reductions. To attain federal air quality standards for ozone and particulate matter and meet targets for reducing black carbon will require aggressive emission reductions and transformation of the freight sector to zero or near zero emission technologies.

Funding this proposal will move California's freight system to become more efficient, competitive, and environmentally while reducing community and environmental impacts.

Staff Recommendation: Approve as Budgeted.

ISSUE 8: VOLKSWAGEN PROGRAM AND LITIGATION COSTS (SFL)

The Governor's Spring Finance Letter requests $3.2 million from the Air Pollution Control Fund, and eight positions for program and litigation costs associated with litigating civil penalties concerning Volkswagen and others for using "defeat devices" on diesel engines. Additionally, $1 million is requested for a one-time equipment purchase and $1 million is requested to contract with the State Attorney General.

BACKGROUND

This proposal is for resources to thoroughly investigate and prepare a civil litigation case concerning Volkswagen, Audi and Porsche vehicles using defeat devices to circumvent emission test procedures. Current resources are inadequate to support work on this investigation and litigation because this case requires a major effort due to the number and types of vehicles and the volume of documentation needed. This case is significant with potential penalties in the hundreds of millions of dollars. Proceeds from regulation violations are deposited in the Air Pollution Control Fund.

On January 4, 2016, the U.S. Department of Justice, on behalf of the U.S. Environmental Protection Agency, filed suit in federal court in Detroit, Michigan. Since the suit is largely the result of work done by the Air Resources Board, and because the Air Resources Board is the nation's leader on air quality, it is key in preparing the federal case as well as for the possible state case against Volkswagen. Since resources are being focused on the Volkswagen case, other important investigations and legal activities have been put on hold or slowed and may not be brought to fruition in a timely manner.

STAFF COMMENTS

Staff supports this request. Having the ability to quickly respond, and begin investigations, when auto manufacturers fail to contain harmful emissions from the vehicles sold in California is vital to preserving air quality in the state. Purposely employing "defeat devices" to circumvent emission test procedures when in fact these vehicles are polluting at rates far higher than allowed is the most egregious of the many types of violations discoverable through certification testing and investigation.

This proposal will allow the Board to bring in additional staff and equipment to conduct necessary testing to support investigations and to conduct legal activities to put corrective actions in place and levy civil penalties. The APCF is a depository for penalties and fees collected on vehicular and non-vehicular air pollution control sources. The fee money in the fund is available to ARB to carry out its duties and functions upon appropriation.

Staff Recommendation: Approve as Budgeted.

ISSUE 9: ENHANCED FLEET MODERNIZATION PROGRAM AUGMENTATION (SFL)

The Governor's Spring Finance Letter requests a one-time increase of $4.6 million (Enhanced Fleet Modernization Subaccount (EFMS)) to meet the increasing demand for the Retire and Replace pilot program in the San Joaquin Air Pollution District and South Coast Air Quality Management District.

BACKGROUND

AB 118, Chapter 750, Statutes of 2007, directs the ARB and the Bureau of Automotive Repair to reduce the number of passenger vehicles, light duty trucks, and medium duty trucks that are high polluters. AB 118 created three new incentive programs to reduce air pollution and greenhouse gas emissions. The incentive programs are:

- Air Quality Improvement Program (AQIP) administered by ARB to fund clean vehicle and equipment projects which reduce criteria pollutant and air toxics emissions often with concurrent climate change benefits.
- Alternative and Renewable Fuel and Vehicle Technology Program administered by the California Energy Commission to fund clean fuel and vehicle projects that help meet California's climate change goals.
- EFMP administered by BAR to expand the State's voluntary car scrap programs.

STAFF COMMENTS

High demand in the EFMP Retire and Replace pilot programs in the San Joaquin and South Coast air districts has resulted in both programs being over-subscribed. The programs were initiated in June 2015, and by December 2015 this funding was exhausted after replacement of approximately 600 vehicles, evenly divided between the two air districts.

The South Coast Air Quality Management District currently has a backlog of roughly 2,000 applicants. The San Joaquin Valley Air Pollution Control District continues to see a large volume of interested and eligible applicants at those events.

Approving this appropriation will allow ARB to meet this high demand and provide funding for the program to reach the greatest number of participants with limited interruption or the need for waitlists. In addition, this appropriation will particularly benefit the low-income and disadvantaged communities that are not able to wait for an extended period of time for programs and benefits to arrive.

Staff Recommendation: Approve as Budgeted.

3360 CALIFORNIA ENERGY COMMISSION

ISSUE 10: CLIMATE CHANGE RESEARCH

The Budget includes $15 million General Fund to support research to reduce petroleum use, reduce greenhouse gas emissions, and improve air quality from California's transportation sector.

BACKGROUND

The Budget includes $15 million General Fund to support research to reduce petroleum use, reduce greenhouse gas emissions, and improve air quality from California's transportation sector. These funds would be contracted out by CEC.

According to the CEC, these investments are designed to inform near-term adoption and implementation of low carbon fuels and to address critical research needs not addressed in current research programs. The final research topics will be developed through engagement with other state agencies, the research community, and the public. The research project funding will be awarded via competitive solicitations and support research and pre-commercial development of low carbon alternative fuels, including but not limited to:

Low Carbon Fuel Research:

- Improving the economics of algae-based renewable diesel production
- Hydrogen production from renewable sources combined with fueling infrastructure and onsite storage for load and supply management
- Pathways for cost-effective development and implementation of low-carbon fuels, including innovative economic tools and accounting for multiple benefits and product development

The program could potentially also support other areas of research for advanced light-duty and sustainable freight technologies to further reduce petroleum use in the transportation sector. These additional topics will be vetted through a public comment process and include but are not limited to:

Light-Duty:

- Research on potential opportunities for low cost and efficient hydrogen onboard vehicle storage
- Development of advanced climate control systems (could also be applied in freight applications) to reduce fuel economy penalty

Sustainable Freight:

- Pilot demonstrations of integrated technologies and fuel and operations management for sustainable freight in select trade corridors (e.g., electric switcher cars)

- Maritime transportation and port operations - quantifying the needs, opportunities and benefits for reducing emissions and operating costs from maritime transportation.
- liquefied natural gas bunkering and electrification of off-road equipment at ports.
- Hybridization for heavy-duty trucks

The Energy Commission requests authority for a two-year encumbrance period and an additional four years to expend these funds

STAFF COMMENTS

While the CEC research objectives have merit, the Subcommittee has expressed interest in funding other research goals, such as climate adaptation research, which the Subcommittee may believe is a higher priority for a General Fund investment.

Staff Recommendation: Hold Open

ISSUE 11: ALISO CANYON ELECTRICITY SYSTEM INTEGRATION AND GRID RELIABILITY

The Department of Finance has proposed an April 1 Spring Fiscal Letter to provide funding for CEC to study electric grid reliability after the closure of the Aliso Canyon facility.

BACKGROUND

During peak electric usage, California power generators use natural gas stored in underground storage facilities to generate additional power. Natural gas travels only 20 to 30 miles an hour in gas pipelines from the gas fields of Texas, New Mexico, and the Rocky Mountains, so the State has relied on 14 storage facilities have a working gas capacity of roughly 374 billion cubic feet (Bcf) and a maximum daily delivery of 8.5 Bcf for customer uses, such as space and water heating, and power generation. The recent closure of the Aliso Canyon storage facility has reduced the available natural gas that can be used for this peak generation.

The CEC requests authority for three permanent positions, one-time contract funds of $1,000,000 for technical assistance, and ongoing contract funds of $150,000, for a total request of $1,739,000 from the Public Interest Research, Development, and Demonstration Fund to improve the Energy Commission's technical ability to monitor, model, and analyze the interaction of California's electricity and natural gas systems for grid reliability.

This includes pipeline and system dispatch modeling, underground storage operations, forward price monitoring and financial risk assessment, and relationships between weather and gas balances as they influence electric reliability. It will allow the Energy Commission to fulfill its reliability contingency planning authority for the natural gas system as it has for the electricity system. Authority for a two-year encumbrance period for the one-time technical assistance funds is also requested. This proposal also requests trailer bill language (TBL) that repeals the annual fund transfer of $10 million from the Public interest Research, Development, and Demonstration Fund to the Alternative and Renewable Fuel and Vehicle Technology Fund authorized by Health and Safety Code Section 44273.

STAFF COMMENTS

The proposed resources would allow the CEC to conduct modeling to insure service reliability across California with in house staff. In addition, it would help refine the extent to which the closure of Aliso Canyon impacts power generation.

Staff Recommendation: Adopt Spring Fiscal Letter

ISSUE 12: OTHER CEC BUDGET REQUESTS

CEC has seven other requests for funding in the Governor's Budget and in a Spring Fiscal Letter.

BACKGROUND

- **SB 350 Implementation.** The Budget proposes 29.5 positions, and $7.6 million to implement SB 350 (de Leon, Chapter 547 of 2015). Under the requirements of the bill, the CEC is responsible for prepare an assessment of savings on electrical and natural gas use and to measure the compliance with meeting a 2030 goal to achieve a 50 percent Renewable Portfolio Standards. In addition, these staff will conduct studies on barriers to renewable energy, energy efficiency, and zero and near-zero emissions transportation options.

- **EPIC Program Increase.** The budget includes a total $11.2 million increase in the Electric Program Investment Charge (EPIC). Of this amount $4.5 million is the reappropriation of unspent prior year funding and $7.5 million would be an ongoing baseline increase that reflects an inflation escalation increase.

- **Implementation of Recent Legislation.** The Budget includes $1.8 million and 9 positions for the implementation of AB 802 (Williams, Chapter 590 of 2015) Accelerating Energy Efficiency Through Benchmarking and Customer Data Analysis and AB 865 (Alejo, Chapter 583 of 2015) Diversity Outreach Program.

- **Position Conversions.** The Budget proposes $951,000 to convert eight temporary positions for six positions associated with development of the disaggregated energy demand forecasts, one position for an International Relations Advisor and one position associated with the Acceptance Test Technician Certification program.

- **Federal Funds of Energy Efficiency.** CEC proposes appropriating $8 million of federal funds, some of which are unspent ARRA funds for the DGS Energy Efficiency State Property Revolving fund and a competitive program for local governments.

- **Ramp down of the Public Interest Charge and Reappropriation of Unspent PIER Funding.** The CEC is requesting $1.3 million for the final ramp-down of the Public Goods Charge, which funded the Public Interest Energy Research (PIER). The funding allows staff to close out contracts and grants remaining from the program. The Public Goods Charge ended on January 2, 2012, they request that $3.6 million of prior-year Public Interest Energy Research funding be appropriated to support pipeline safety research.

- **April 1 Fiscal Letter regarding the implementation of SB 454**. The Department of Finance has submitted an April 1st Spring Fiscal Letter requesting $275,000 from the Appliance Efficiency Enforcement Subaccount for the Title 20 Appliance Efficiency Standards Compliance Assistance and Enforcement Program. SB 454 (Pavley, Chapter 591, Statutes of 2011) authorized the Energy Commission to establish an administrative enforcement process for violations of the Energy Commission's appliance efficiency standards, with penalties up to $2,500 per violation. The requested staff resources will conduct investigations to uncover violations leading to penalties levied through a formal administrative adjudication, mutual settlement or litigation, and conduct compliance assistance, outreach and education to stakeholders on how to comply with the Energy Commission's regulations.

STAFF COMMENTS

Staff has no concerns with these proposals.

Staff Recommendation: Approve as Budgeted and Adopt Spring Fiscal Letter