BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BOARD OF DIRECTORS
MOBILE SOURCE COMMITTEE

COMMITTEE MEMBERS

DAVID CANEPA – CHAIR
MARGARET ABE-KOGA
DAVID HUDSON
DOUG KIM
KAREN MITCHOFF
ROD SINKS
PAULINE RUSSO CUTTER – VICE CHAIR
SCOTT HAGGERTY
TYRONE JUE
LIZ KNISS
KATIE RICE

THURSDAY
MAY 23, 2019
9:30 A.M.

1ST FLOOR BOARD ROOM
375 BEALE STREET
SAN FRANCISCO, CA 94105

AGENDA

1. **CALL TO ORDER - ROLL CALL**

PLEDGE OF ALLEGIANCE

PUBLIC MEETING PROCEDURE

The Committee Chair shall call the meeting to order and the Clerk of the Boards shall take roll of the Committee members. The Committee Chair shall lead the Pledge of Allegiance.

This meeting will be webcast. To see the webcast, please visit www.baaqmd.gov/bodagendas at the time of the meeting. Closed captioning may contain errors and omissions, and are not certified for their content or form.

Public Comment on Agenda Items *The public may comment on each item on the agenda as the item is taken up. Public Comment Cards for items on the agenda must be submitted in person to the Clerk of the Boards at the location of the meeting and prior to the Board taking up the particular item. Where an item was moved from the Consent Calendar to an Action item, no speaker who has already spoken on that item will be entitled to speak to that item again.*

2. **PUBLIC COMMENT ON NON-AGENDA MATTERS**

Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3
For the first round of public comment on non-agenda matters at the beginning of the agenda, ten persons selected by a drawing by the Clerk of the Boards from among the Public Comment Cards indicating they wish to speak on matters not on the agenda for the meeting will have two minutes each to address the Board on matters not on the agenda. For this first round of public comments on non-agenda matters, all Public Comment Cards must be submitted in person to the Clerk of the Board at the location of the meeting and prior to commencement of the meeting.

Staff/Phone (415) 749-

3. **APPROVAL OF THE MINUTES OF APRIL 25, 2019**

Clerk of the Boards/5073

The Committee will consider approving the attached draft minutes of the Mobile Source Committee meeting of April 25, 2019.

4. **PROJECTS AND CONTRACTS WITH PROPOSED GRANT AWARDS OVER $100,000**

K. Schkolnick/5070
kschkolnick@baaqmd.gov

The Committee will consider recommending the Board of Directors approve the Carl Moyer Program, Transportation Fund for Clean Air, and Reformulated Gasoline Settlement Fund projects requesting grant funding in excess of $100,000 and authorization for the Executive Officer/APCO to execute grant agreements for the recommended projects.

5. **FISCAL YEAR ENDING (FYE) 2020 TRANSPORTATION FUND FOR CLEAN AIR (TFCA) REGIONAL FUND POLICIES & EVALUATION CRITERIA**

K. Schkolnick/5070
kschkolnick@baaqmd.gov

The Committee will consider recommending the Board of Directors approve the proposed FYE 2020 TFCA Regional Fund Policies and Evaluation Criteria, and approve a change to FYE 2020 TFCA County Program Manager Fund Policies, to increase the cost-effectiveness threshold for Bicycle Facility projects such that it is aligned with the threshold that is proposed for the Regional Fund Policies.

6. **ELECTRIC VEHICLE (EV) ECOSYSTEM UPDATE: EV EQUITY**

R. Chiang/8621
rchiang@baaqmd.gov

The Committee will receive the third part of the update on the topic of equity and light-duty (passenger) electric vehicles in the Bay Area and an update on the new Clean Cars for All program to help make hybrid, plug-in hybrid, and electric vehicles affordable for low income residents in the Bay Area.

7. **PUBLIC COMMENT ON NON-AGENDA MATTERS**

Speakers who did not have the opportunity to address the Committee in the first round of comments on non-agenda matters will be allowed two minutes each to address the Committee on non-agenda matters.

8. **COMMITTEE MEMBER COMMENTS**

Any member of the Board, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)

9. **TIME AND PLACE OF NEXT MEETING**

Thursday, July 25, 2019, Bay Area Air Quality Management District Office, 375 Beale Street, San Francisco, California 94105 at 9:30 a.m.

10. **ADJOURNMENT**

The Committee meeting shall be adjourned by the Committee Chair.

CONTACT:
MANAGER, EXECUTIVE OPERATIONS **(415) 749-4941**
375 BEALE STREET, SAN FRANCISCO, CA 94105 **FAX: (415) 928-8560**
vjohnson@baaqmd.gov **BAAQMD homepage:**
www.baaqmd.gov

- To submit written comments on an agenda item in advance of the meeting. Please note that all correspondence must be addressed to the "Members of the Mobile Source Committee" and received at least 24 hours prior, excluding weekends and holidays, in order to be presented at that Committee meeting. Any correspondence received after that time will be presented to the Committee at the following meeting.

- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.

- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the District's offices at 375 Beale Street, Suite 600, San Francisco, CA 94105, at the time such writing is made available to all, or a majority of all, members of that body.

Accessibility and Non-Discrimination Policy

The Bay Area Air Quality Management District (Air District) does not discriminate on the basis of race, national origin, ethnic group identification, ancestry, religion, age, sex, sexual orientation, gender identity, gender expression, color, genetic information, medical condition, or mental or physical disability, or any other attribute or belief protected by law.

It is the Air District's policy to provide fair and equal access to the benefits of a program or activity administered by Air District. The Air District will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by the Air District. Members of the public who believe they or others were unlawfully denied full and equal access to an Air District program or activity may file a discrimination complaint under this policy. This non-discrimination policy also applies to other people or entities affiliated with Air District, including contractors or grantees that the Air District utilizes to provide benefits and services to members of the public.

Auxiliary aids and services including, for example, qualified interpreters and/or listening devices, to individuals who are deaf or hard of hearing, and to other individuals as necessary to ensure effective communication or an equal opportunity to participate fully in the benefits, activities, programs and services will be provided by the Air District in a timely manner and in such a way as to protect the privacy and independence of the individual. Please contact the Non-Discrimination Coordinator identified below at least three days in advance of a meeting so that arrangements can be made accordingly.

If you believe discrimination has occurred with respect to an Air District program or activity, you may contact the Non-Discrimination Coordinator identified below or visit our website at www.baaqmd.gov/accessibility to learn how and where to file a complaint of discrimination.

Questions regarding this Policy should be directed to the Air District's Non-Discrimination Coordinator, Rex Sanders, at (415) 749-4951 or by email at rsanders@baaqmd.gov

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
375 BEALE STREET, SAN FRANCISCO, CA 94105
FOR QUESTIONS PLEASE CALL (415) 749-4941

EXECUTIVE OFFICE:
MONTHLY CALENDAR OF AIR DISTRICT ANTICIPATED MEETINGS

MAY 2019

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Community and Public Health Committee	Monday	20	9:30 a.m.	1st Floor, Board Room
Board of Directors Legislative Committee	Wednesday	22	9:30 a.m.	1st Floor, Yerba Buena Room #109
Board of Directors Mobile Source Committee	Thursday	23	9:30 a.m.	1st Floor Board Room

JUNE 2019

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Regular Meeting	Wednesday	5	9:30 a.m.	1st Floor Board Room
Board of Directors Climate Protection Committee	Monday	10	9:30 a.m.	1st Floor Board Room
Board of Directors Regular Meeting (CANCELLED)	Wednesday	19	9:30 a.m.	1st Floor Board Room
Board of Directors Community and Public Health Committee	Thursday	20	9:30 a.m.	1st Floor Board Room
Board of Directors Budget and Finance Committee (CANCELLED)	Wednesday	26	9:30 a.m.	1st Floor, Yerba Buena Room #109
Board of Directors Mobile Source Committee (CANCELLED)	Thursday	27	9:30 a.m.	1st Floor Board Room

JULY 2019

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Regular Meeting (CANCELLED)	**Wednesday**	**3**	**9:30 a.m.**	**1st Floor Board Room**
Board of Directors Stationary Source	**Monday**	**15**	**9:30 a.m.**	**1st Floor Board Room**
Board of Directors Personnel Committee (CANCELLED)	**Wednesday**	**17**	**9:30 a.m.**	**1st Floor Board Room**
Board of Directors Legislative Committee (CANCELLED)	**Wednesday**	**24**	**9:30 a.m.**	**1st Floor, Yerba Buena Room #109**
Board of Directors Mobile Source Committee	**Thursday**	**25**	**9:30 a.m.**	**1st Floor Board Room**
Advisory Council Meeting	**Monday**	**29**	**10:00 a.m.**	**1st Floor Board Room**
Board of Directors Special Meeting	**Wednesday**	**31**	**9:30 a.m.**	**1st Floor Board Room**

AD – 5/15/2019 –1:48 p.1m. **G/Board/Executive Office/Moncal**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson David Canepa and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 8, 2019

Re: Approval of the Minutes of April 25, 2019

RECOMMENDED ACTION

Approve the attached draft minutes of the Mobile Source Committee (Committee) meeting of April 25, 2019.

DISCUSSION

Attached for your review and approval are the draft minutes of the Committee meeting of April 25, 2019.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

Attachment 3A: Draft Minutes of the Committee Meeting of April 25, 2019

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105
(415) 749-5073

DRAFT MINUTES

Summary of Board of Directors
Mobile Source Committee Meeting
Thursday, April 25, 2019

1. CALL TO ORDER – ROLL CALL

Mobile Source Committee (Committee) Chairperson, David Canepa, called the meeting to order at 9:34 a.m.

Present: Chairperson David Canepa; and Directors Scott Haggerty, David Hudson, Tyrone Jue, Karen Mitchoff, and Katie Rice.

Absent: Vice Chairperson Pauline Russo Cutter; and Directors Margaret Abe-Koga, Doug Kim, and Liz Kniss.

Also Present: None.

2. PUBLIC COMMENT ON NON-AGENDA ITEMS, PURSUANT TO GOVERNMENT CODE SECTION 54954.3

No requests received.

3. APPROVAL OF THE MINUTES OF MARCH 28, 2019

Public Comments

No requests received.

Committee Comments

None.

Committee Action

Director Hudson made a motion, seconded by Director Haggerty, to **approve** the Minutes of March 28, 2019; and the motion carried by the following vote of the Committee:

AYES: Canepa, Haggerty, Hudson, Jue, Mitchoff, Rice.
NOES: None.
ABSTAIN: None.
ABSENT: Abe-Koga, Cutter, Kim, Kniss.

4. PROJECTS AND CONTRACTS WITH PROPOSED GRANT AWARDS OVER $100,000

Karen Schkolnick, Strategic Incentives Division Director, introduced Chengfeng Wang, Air Quality Program Manager, who gave the staff presentation *Projects and Contracts with Proposed Grant Awards Over $100,000,* including: overview; Carl Moyer Program (CMP) and Mobile Source Incentive Fund (MSIF); Community Health Protection Grant Program (CHP); CMP, MSIF, CHP project recommendations over $100K; Transportation Fund for Clean Air (TFCA); projected grant revenues for Fiscal Year Ending (FYE) 2019; funds recommended and awarded by project category and county since July 2018; status of incentive funding awarded since July 2018, by funding source; open solicitations and FYE 2019 funding; and recommended actions.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed previous awards from the Reformulated Gasoline Settlement Fund and its current (third) solicitation; whether pilot programs that are initially funded; the proposed amendment to Policy #2 of the FYE 2019 TFCA Regional Fund Policies and FYE 2020 TFCA CMP Fund Policies to increase the cost-effectiveness limit for Pilot Trip Reduction projects from $250,000 to $500,000, prompted by three eligible Pilot Trip Reduction projects proposed an individual grant award over $100,000, and disadvantages of the proposed threshold increase; whether funding mechanisms exist to fund projects beyond their pilot phase; the average amount of TFCA funding the County Program Manager (CPM) Fund is allocated each fiscal year; and whether approving this item affects whether subsequent items on this agenda may be approved.

Committee Action

Chair Canepa made a motion, seconded by Director Mitchoff, to recommend that the Board **approve** staff recommendations; and the motion carried by the following vote of the Committee:

AYES: Canepa, Haggerty, Hudson, Jue, Mitchoff, Rice.
NOES: None.
ABSTAIN: None.
ABSENT: Abe-Koga, Cutter, Kim, Kniss.

5. TRANSPORTATION FUND FOR CLEAN AIR (TFCA) FUNDING FOR SHUTTLE AND RIDESHARING PROJECTS

Ms. Schkolnick introduced Ken Mak, Supervising Staff Specialist, who gave the staff presentation *TFCA Funding for Shuttle and Ridesharing Projects*, including: overview; FYE 2019 TFCA Shuttle and Ridesharing solicitation; Metropolitan Transportation Commission's (MTC) 2019 Rideshare application; TFCA trip reduction projects; diminishing air quality benefits; air quality benefits of TFCA-funded shuttle and rideshare projects; cost-effectiveness thresholds over time; existing shuttle and ridesharing historical trends; other challenges and next steps; and recommended actions.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed the methodology that evaluates tailpipe emissions and other benefits; how Air District funds must be awarded to public agencies only, but can be used to benefit private entities; the need to identify and reach out to smaller companies that employ low-income residents and make them aware of these funding opportunities through their jurisdictions' transportation agencies; the request for future Board discussion of revisions to policies that govern the expenditure of TFCA Regional Fund monies; MTC's 2019 Rideshare Project application for TFCA funds, and how the project cannot effectively be evaluated under the Shuttle and Rideshare Program evaluation criteria, but does align with goals and objectives of the Air District's Spare the Air Program; long-term reporting requirements of the project, should it be awarded the proposed TFCA funds; the project's benefits and the projected number of passenger vehicles that would no longer be on the roads and freeways as the result of this project; and the concern that MTC does not have historical ridership data that is needed to evaluate the effect of the subsidy on vanpool ridership and reducing single occupancy vehicle trips that is needed to determine cost-effectiveness using the existing methodology.

Committee Action

Director Haggerty made a motion, seconded by Director Mitchoff, to recommend that the Board **approve** staff recommendations; and the motion carried by the following vote of the Committee:

AYES:	Canepa, Haggerty, Hudson, Jue, Mitchoff, Rice.
NOES:	None.
ABSTAIN:	None.
ABSENT:	Abe-Koga, Cutter, Kim, Kniss.

6. FISCAL YEAR ENDING (FYE) 2020 TRANSPORTATION FUND FOR CLEAN AIR (TFCA) COUNTY PROGRAM MANAGER (CPM) EXPENDITURE PLANS AND A REQUEST FROM ALAMEDA COUNTY TRANSPORTATION COMMISSION (ACTC) FOR A CPM POLICY WAIVER

Ms. Schkolnick introduced Linda Hui, Staff Specialist, who gave the staff presentation *FYE 2020 TFCA CPM Expenditure Plans and ACTC Policy Waiver Request*, including: overview; CMP program background; FYE 2020 funding for CPM; ACTC policy waiver request; and recommended actions.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed the reasons why the Oakland Broadway B Shuttle project does not meet Air District Board-adopted FYE 2019 CPM Fund Policy #28.d, and why ACTC is requesting a policy waiver; the clarification that the waiver request does not include the allocation of funds for the project, but rather, makes the project eligible to be awarded funding; whether the policy needs to be updated; whether the Air District would recommend this project for funding; the request that the wording of the third staff recommendation for this item be revised as such: "Approve a policy waiver to allow ACTC to apply for ~~use~~ TFCA CPM funds for a shuttle project."

Committee Action

Director Haggerty made a motion, seconded by Director Hudson, to recommend that the Board **approve** staff recommendations; and the motion carried by the following vote of the Committee:

AYES:	Canepa, Haggerty, Hudson, Jue, Mitchoff, Rice.
NOES:	None.
ABSTAIN:	None.
ABSENT:	Abe-Koga, Cutter, Kim, Kniss.

7. ELECTRIC VEHICLE (EV) ECOSYSTEM UPDATE: EV INCENTIVES AND AWARENESS PROGRAMS AND APPROVAL OF CONTRACTS FOR EV SERVICES

Ranyee Chiang, Technology Implementation Officer, introduced Mark Tang, Staff Specialist, who gave the staff presentation *EV Ecosystem Update: EV Programs: Incentives and Awareness*, including: EV Ecosystem update; EV incentives programs; EV infrastructure incentives programs; Charge! Program – grants for businesses and local governments; over $10 Million (M) awarded from 2016-2019; geographic distribution of Charge! projects from 2016-2019; Charge! is supporting 35% of publicly-accessible EV charging ports in the Bay Area; charger usage has increased due to more installations and higher utilization rates; awareness programs; Air District EV awareness and outreach activities; Bay Area EV Coordinating Council; EV market research study – Request for Proposals (RFP) released in December 2018 and review panel average scores;

recommendation 1 of 2 - Center for Sustainable Energy; recommendation 2 of 2 - Kearns and West; and recommended actions.

Public Comments

No requests received.

Committee Comments

The Committee and staff discussed potential conflicts of interest of the firms that responded to the Air District's Request for Proposals (RFP) for Facilitation and Meeting Coordination for the Bay Area EV Coordinating Council, and the request that future charts indicating candidates' RFP scores clearly distinguish whether a candidate has a conflict of interest; funding sources for publicly-accessible EV charging ports.

Committee Action

Director Mitchoff made a motion, seconded by Director Hudson, to recommend that the Board **approve** staff recommendations; and the motion carried by the following vote of the Committee:

AYES:	Canepa, Haggerty, Hudson, Jue, Mitchoff, Rice.
NOES:	None.
ABSTAIN:	None.
ABSENT:	Abe-Koga, Cutter, Kim, Kniss.

8. PUBLIC COMMENT ON NON-AGENDA MATTERS

No requests received.

9. COMMITTEE MEMBER COMMENTS

None.

10. TIME AND PLACE OF NEXT MEETING

Thursday, May 23, 2019, Bay Area Air Quality Management District Office, 375 Beale Street, San Francisco, California 94105 at 9:30 a.m.

11. ADJOURNMENT

The meeting adjourned at 11:17 a.m.

Marcy Hiratzka
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson David Canepa and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 13, 2019

Re: Projects and Contracts with Proposed Grant Awards Over $100,000

RECOMMENDED ACTION

Recommend Board of Directors:

1. Approve recommended projects with proposed grant awards over $100,000 as shown in Attachment 1; and

2. Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants for the recommended projects.

BACKGROUND

The Bay Area Air Quality Management District (Air District) has participated in the Carl Moyer Program (CMP), in cooperation with the California Air Resources Board (CARB), since the program began in fiscal year 1998-1999. The CMP provides grants to public and private entities to reduce emissions of oxides of nitrogen (NOx), reactive organic gases (ROG) and particulate matter (PM) from existing heavy-duty engines by either replacing or retrofitting them. Eligible heavy-duty diesel engine applications include on-road trucks and buses, off-road equipment, marine vessels, locomotives, and stationary agricultural pump engines.

Assembly Bill (AB) 923 (AB 923 - Firebaugh), enacted in 2004 (codified as Health and Safety Code (HSC) Section 44225), authorized local air districts to increase their motor vehicle registration surcharge up to an additional $2 per vehicle. The revenues from the additional $2 surcharge are deposited in the Air District's Mobile Source Incentive Fund (MSIF). AB 923 stipulates that air districts may use the revenues generated by the additional $2 surcharge for projects eligible under the CMP.

In 2017, AB 617 directed CARB, in conjunction with local air districts to establish the Community Air Protection Program. AB 617 provides a new community-focused action framework to improve air quality and reduce exposure to criteria air pollutants and toxic air contaminants in communities most impacted by air pollution. In advance of the development of the Community Air Protection Program, the Governor and legislature established an early action component to AB 617 to use existing incentive programs to get immediate emission reductions in the communities most

affected by air pollution. AB 134 (2017) appropriated $250 million from the Greenhouse Gas Reduction Fund (GGRF) to reduce mobile source emissions including criteria pollutants, toxic air contaminants, and greenhouse gases in those communities. The Bay Area has been allocated $50 million of these funds for emission reduction projects. These funds will be used to implement projects under the CMP, and optionally on-road truck replacements under the Proposition 1B Goods Movement Emission Reduction Program.

On February 21, 2018, the Board of Directors (Board) authorized Air District participation in Year 20 of the CMP, and authorized the Executive Officer/APCO to execute Grant Agreements and amendments for projects funded with CMP funds or MSIF revenues, with individual grant award amounts up to $100,000.

In 1991, the California State Legislature authorized the Air District to impose a $4 surcharge on motor vehicles registered within the nine-county Bay Area to fund projects that reduce on-road motor vehicle emissions within the Air District's jurisdiction. The statutory authority for the Transportation Fund for Clean Air (TFCA) and requirements of the program are set forth in the HSC Sections 44241 and 44242. Sixty percent of TFCA funds are awarded by the Air District to eligible projects and programs implemented directly by the Air District (e.g., Spare the Air, electric vehicle charging station program) and to a program referred to as the TFCA Regional Fund. Each year, the Board allocates funding and adopts policies and evaluation criteria that govern the expenditure of TFCA Regional Fund monies. The remaining forty percent of TFCA funds are pass-through funds to the designated County Program Manager (CPM) in each of the nine counties within the Air District's jurisdiction.

On May 2, 2018, the Board authorized funding allocations for use of the sixty percent of the TFCA revenue in Fiscal Year Ending (FYE) 2019, cost-effectiveness limits for Air District-sponsored FYE 2019 programs, and the Executive Officer/APCO to execute grant agreements and amendments for TFCA-revenue funded projects with individual grant award amounts up to $100,000. On June 6, 2018, the Board adopted policies and evaluation criteria for the FYE 2019 TFCA Regional Fund program.

The Bay Area Clean Air Foundation (Foundation) is a nonprofit support organization for the Air District. As part of its operation, the Foundation applies for grant funding from various sources and also accepts funding to reduce and offset air emissions within the boundaries of the Air District. To administer the grant programs associated with this funding, the Foundation has a contract with the Air District, which allows for staff to be used to complete work to expend these monies. On December 5, 2017, the Foundation executed a contract to receive an award of $1.3 million in Reformulated Gasoline Settlement Fund (RFG) funding to help accelerate the adoption of zero- and near-zero-emission equipment and vehicles in and near the Port of Oakland.

Projects with grant award amounts over $100,000 are brought to the Mobile Source Committee for consideration at least on a quarterly basis. Staff reviews and evaluates grant applications based upon the respective governing policies and guidelines established by the CARB and the Board.

DISCUSSION

Carl Moyer Program and Community Health Protection Grant Program:

For the CMP Year 20 cycle, the Air District had more than $11 million available for eligible CMP and school bus projects from a combination of MSIF and CMP funds. The Air District started accepting project applications for the CMP Year 20 funding cycle on June 25, 2018 and applications are accepted and evaluated on a first-come, first-served basis. On December 20, 2017 the Board authorized the Air District to accept, obligate and expend $50 million in AB 134 funds through the Community Health Protection Grant Program.

As of May 3, 2019, the Air District had received 228 project applications. Of the applications that have been evaluated between April 5, 2019 and May 3, 2019, two eligible projects have proposed individual grant awards over $100,000. These projects will replace five diesel tractors, and will reduce over 0.88 tons of NOx, ROG and PM per year. Staff recommends the allocation of $271,135 for these projects from a combination of CMP funds and MSIF revenues. Attachment 1, Table 1, provides additional information on these projects.

Attachment 2, lists all of the eligible projects that have been received by the Air District as of May 3, 2019, including information about the equipment category, award amounts, estimated emissions reductions, and county location. Approximately 63% of the funds have been awarded to projects that reduce emissions in highly impacted Bay Area communities. Attachment 4, Figures 4 and 5 summarize the cumulative allocation of CMP, MSIF, and Community Health Protection Grant Program funding since 2009 (more than $269 million awarded to 1,162 projects).

Transportation Fund for Clean Air Program and Reformulated Gasoline Settlement Fund (RFG):

In FYE 2019, the Air District had approximately $20 million in TFCA funds available for eligible projects. To date, the Air District has issued solicitations for existing shuttle & rideshare, pilot trip reduction, and electric vehicle charging station projects. The Air District also issued a solicitation for the West Oakland Zero-Emission Grant Program, which is funded through the RFG, and which the Air District has provided TFCA funds as match for on-road vehicle projects.

As of May 3, 2019, the Air District had received 39 project applications for TFCA and RFG funds. Of the applications that were evaluated between April 6, 2019 and May 3, 2019, one eligible TFCA and two eligible RFG projects proposed an individual grant award over $100,000.

The TFCA project that is recommended for award over $100,000 will support the installation of 20 DC fast charging stations located in San Francisco, Novato, Emeryville and San Jose. This project will reduce approximately 0.4 tons of NOx, ROG and PM per year. Staff recommends an award of $500,000 in TFCA funds for this project.

The two RFG projects that are recommended for awards over $100,000 will install and operate 10 DC fast charging stations near the Oakland International Airport and purchase and operate six electric yard hostlers at the Union Pacific Railroad Oakland Intermodal Facility. The projects will

reduce over 5 tons of NOx, ROG and PM per year. Staff recommends the allocation of $989,400 in RFG funds for these projects. Since this request exceeds the remaining RFG funds available by $53,000, the balance of the proposed award will be placed on a contingency list in case additional funds become available. In addition to evaluating emissions reductions, projects that receive RFG funding are also evaluated on the amount of petroleum reduced; the two projects receiving RFG funding are expected to reduce petroleum (diesel and gasoline) consumption by approximately 51,000 gallons per year in West Oakland.

Attachment 1, Table 2, provides additional information on the TFCA and RFG projects proposed for award over $100,000. Attachment 3 lists all eligible TFCA and RFG projects that were evaluated as of May 3, 2019, including information about the equipment category, award amounts, estimated emissions reductions, and county location. Approximately 31% of the funds have been awarded to projects that reduce emissions in highly impacted Bay Area communities.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None. The Air District distributes CMP, MSIF, Community Health Protection Grant Program, and TFCA funding to public agencies and private entities on a reimbursement basis. Funding for administrative costs is provided by each funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Anthony Fournier, Sean Newlin, and Mark Tang
Reviewed by: Karen Schkolnick and Chengfeng Wang

Attachment 1: Projects with Grant Awards Greater than $100,000
Attachment 2: CMP/MSIF, FARMER and Community Health Protection Grant Program Approved Projects
Attachment 3: TFCA Approved and Eligible Projects
Attachment 4: Summary of Funding Awarded Between 7/1/18 and 5/3/19

AGENDA 4 - ATTACHMENT 1

Table 1 - Carl Moyer Program/ Mobile Source Incentive Fund, FARMER, and Community Health Protection Grant Program projects with grant awards greater than $100k (Evaluated between 4/6/19 and 5/3/19)

Project #	Applicant name	Equipment Category	Project Description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NOx	ROG	PM	
20MOY202	Clos Du Val Wine Company, Ltd.	Ag/ off-road	Replacement of three diesel tractors	$ 163,910	$ 205,467	0.413	0.058	0.049	Napa
20MOY196	Loma Del Sol Farming, Inc.	Ag/ off-road	Replacement of two diesel tractors	$ 107,225	$ 134,032	0.287	0.045	0.032	Sonoma
2 Projects				$ 271,135	$ 339,499	0.700	0.103	0.081	

Table 2 - Summary of Transportation Fund for Clean Air/Reformulated Gasoline Settlement projects with grant awards greater than $100k (Evaluated between 4/6/19 and 5/3/19)

Project #	Applicant name	Project Category	Project Description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NO_X	ROG	PM	
19EV006	EVGo Services, LLC	LD Infrastructure	Install and operate twenty 50kW DC Fast charging stations at 7 transportation corridor facilities in San Francisco, Novato, Emeryville and San Jose	$ 500,000	$ 1,522,630	0.168	0.249	0.005	Regional
19RFG13*	EVgo Services, LLC	LD Infrastructure	Install and operate ten 50kW DC fast charging stations	$ 389,400	$ 778,800	0.040	0.060	0.001	Alameda
19RFG15*	Rail Management Services, LLC	Off-Road	Purchase and operate six electric yard hostlers	$ 600,000	$ 1,864,118	0.375	0.015	0.022	Alameda
3 Projects				$ 1,489,400	$ 4,165,548	0.583	0.324	0.028	

* These projects are fully funded by Reformulated Gasoline Settlement (RFG) Fund.

ATTACHMENT 2

CMP/MSIF, FARMER and Community Health Protection Grant Program approved projects (between 7/6/18 and 5/3/19)

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
19MOY166	On-road	Equipment replacement	1	$ 45,000.00	Deol Trans / Piara Singh	0.668	0.050	0.004	APCO	Contra Costa
19MOY168	Ag/ off-road	Equipment replacement	1	$ 33,000.00	Rancho Las Juntas Vineyard	0.028	0.006	0.004	APCO	Contra Costa
19MOY163	Marine	Engine replacement	1	$ 180,000.00	Bettencourt and Son (Commercial fishing)	0.647	0.009	0.021	10/17/2018	San Mateo
19MOY182	On-road	Equipment replacement	1	$ 45,000.00	Thy Trucking	0.677	0.050	0.004	APCO	Alameda
19MOY185	On-road	Equipment replacement	1	$ 60,000.00	Puerta Trucking	0.717	0.097	0.032	APCO	Merced
19MOY158	Ag/ off-road	Equipment replacement	1	$ 117,000.00	Ocean Breeze Dairy	0.310	0.020	0.015	10/17/2018	Sonoma
19MOY159	Ag/ off-road	Equipment replacement	1	$ 40,480.00	Trefethen Farming LLC	0.173	0.030	0.021	APCO	Napa
19MOY176	Ag/ off-road	Equipment replacement	1	$ 60,930.00	Bazan Vineyard Management	0.198	0.033	0.025	APCO	Napa
19SBP12	School bus	Equipment replacement	4	$ 512,170.00	Moreland School District	0.237	0.016	0.000	10/17/2018	Santa Clara
19MOY148	Off-road	Equipment replacement	2	$ 197,278.00	The Lumber Baron, Inc.	0.178	0.044	0.008	10/17/2018	Alameda
19SBP97	School bus	Equipment replacement	8	$ 1,635,693.00	Vallejo City Unified School District	0.826	0.065	0.000	10/17/2018	Solano
19MOY175	Off-road	Equipment replacement	1	$ 75,680.00	Mt. Diablo Landscape Centers, LLC	0.189	0.031	0.023	APCO	Contra Costa
20MOY51	Ag/ off-road	Equipment replacement	5	$ 467,856.00	Johnson and Neles Dairy	1.985	0.208	0.124	10/17/2018	Sonoma
20MOY52	On-road	Equipment replacement	1	$ 60,000.00	James Marlowe Carson	0.904	0.068	0.005	APCO	Napa
19MOY181	Ag/ off-road	Equipment replacement	1	$ 50,300.00	Jensen Ranch	0.122	0.019	0.011	APCO	Marin
19SBP140	School bus	Equipment replacement	18	$ 4,076,369.00	Fremont Unified School District	1.717	0.139	0.034	10/17/2018	Alameda

AGENDA 4 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20SBP45	School bus	Equipment replacement	2	$ 1,291,000.00	Campbell Union School District	0.104	0.006	0.000	10/17/2018	Santa Clara
19MOY180	On-road	Equipment replacement	26	$ 492,100.00	Nestle Waters North America	1.061	0.046	0.003	11/7/2018	Alameda, Solano
20MOY36	On-road	Equipment replacement	1	$ 60,000.00	ZQR Trucking	0.982	0.074	0.006	APCO	Alameda
20MOY48	Marine	Engine replacement	1	$ 99,500.00	Michael Thomas Hudson (Commercial fishing)	0.257	0.006	0.010	APCO	Alameda
20MOY60	Ag/ off-road	Equipment replacement	1	$ 46,355.00	Siqueira Vineyard Management	0.156	0.026	0.018	APCO	Napa
20MOY50	Marine	Engine replacement	2	$ 159,000.00	Captain Joe's Sportfishing	0.367	0.009	0.017	11/7/2018	San Francisco
20MOY71	Ag/ off-road	Equipment replacement	6	$ 258,796.00	Vina Management Services	0.865	0.124	0.084	11/7/2018	Sonoma
20MOY65	On-road	Equipment replacement	1	$ 40,000.00	Zahniser Trucking	0.738	0.122	0.006	APCO	Contra Costa
20MOY29	Off-road	Equipment replacement	3	$ 15,000.00	D. C. Metals, Inc.	0.126	0.034	0.001	APCO	Alameda
20MOY62	Ag/ off-road	Equipment replacement	1	$ 60,190.00	Vezer Family Vineyards	0.048	0.012	0.010	APCO	Solano
20MOY46	On-road	Equipment replacement	1	$ 49,000.00	Akal Sahai Truck Lines Inc.	1.446	0.217	0.000	APCO	Alameda
20MOY63	On-road	Equipment replacement	1	$ 23,500.00	Always Express Transportation	0.179	0.011	0.001	APCO	Alameda
20MOY49	Marine	Engine replacement	1	$ 148,000.00	F/V Rose Marie Inc.	0.597	-0.011	0.024	12/19/2018	San Francisco
20MOY94	Marine	Engine replacement	1	$ 44,000.00	Jeffrey A Sylva (Commercial fishing)	0.116	0.001	0.004	APCO	Santa Clara
20MOY41	Ag/ off-road	Equipment replacement	1	$ 29,500.00	Kehoe Dairy, Inc	0.049	0.002	0.003	APCO	Marin
20MOY66	Ag/ off-road	Equipment replacement	3	$ 188,700.00	Pina Vineyard Management , LLC.	0.160	0.037	0.028	12/19/2018	Napa
20MOY64	On-road	Equipment replacement	1	$ 60,000.00	Basra Trucking	1.570	0.239	0.083	APCO	Santa Clara

AGENDA 4 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20SBP08	School bus	Equipment replacement	3	$ 1,143,464.00	Antioch Unified School District	0.298	0.023	0.011	12/19/2018	Contra Costa
20MOY76	Ag/ off-road	Equipment replacement	4	$ 169,400.00	FN Viticulture, LLC	0.514	0.057	0.048	12/19/2018	Napa
20MOY97	On-road	Equipment replacement	1	$ 40,000.00	Gosal Trucking	0.835	0.138	0.047	APCO	Contra Costa
20MOY43	Marine	Engine replacement	2	$ 458,000.00	Michael Peery (Commercial fishing)	1.409	0.009	0.059	12/19/2018	Solano
20MOY100	Ag/ off-road	Equipment replacement	3	$ 136,520.00	Grand Crew Vineyard Management	0.211	0.077	0.033	12/19/2018	Napa
20MOY96	On-road	Equipment replacement	1	$ 60,000.00	Reliable Express Transportation Inc.	0.586	0.043	0.003	APCO	Alameda
20MOY67	Marine	Engine replacement	4	$ 1,613,500.00	Harley Marine Services, Inc. Vessel: Z-Three	4.801	-0.135	0.380	12/19/2018	Alameda
20MOY68	Marine	Engine replacement	4	$ 1,613,500.00	Harley Marine Services, Inc. Vessel: Z-Four	4.801	-0.135	0.380	12/19/2018	Alameda
20MOY69	Marine	Engine replacement	4	$ 1,613,500.00	Harley Marine Services, Inc. Vessel: Z-Five	4.801	-0.135	0.380	12/19/2018	Alameda
20MOY110	Off-road	Equipment replacement	3	$ 928,500.00	Steven's Creek Quarry, Inc.	5.136	0.232	0.138	12/19/2018	Santa Clara
20MOY117	On-road	Hydrogen fueling infrastructure	1	$ 1,750,000.00	Alameda-Contra Costa Transit District	0.718	0.011	0.004	12/19/2018	Alameda
20SBP1	School bus	Equipment replacement	2	$ 320,000.00	Pittsburg Unified School District	0.199	0.164	0.001	12/19/2018	Contra Costa
20MOY95	Ag/ off-road	Equipment replacement	1	$ 159,600.00	Stan Poncia dba Terrilinda Dairy	0.893	0.116	0.066	12/19/2018	Sonoma
20MOY99	Ag/ off-road	Equipment replacement	2	$ 121,800.00	T and M Agricultural Services, LLC	0.359	0.047	0.032	12/19/2018	Napa
20SBP72	School bus	Equipment replacement	6	$ 1,246,785.00	Milpitas Unified School District	0.318	0.019	0.007	12/19/2018	Santa Clara
20SBP73	School bus	Equipment replacement	8	$ 1,659,507.00	Berkeley Unified School District	0.617	0.045	0.132	12/19/2018	Alameda
20MOY119	On-road	Equipment replacement	1	$ 40,000.00	Francisco Aguilar dba Salazar Trucking	1.113	0.183	0.000	APCO	Contra Costa
20MOY15	On-road	Equipment replacement	1	$ 10,500.00	RCS Enterprises Inc	0.172	0.019	0.009	APCO	Santa Clara

AGENDA 4 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY120	On-road	Equipment replacement	1	$ 40,000.00	Goga Trucking	1.066	0.175	0.000	APCO	Alameda
20MOY74	Ag/ off-road	Equipment replacement	1	$ 57,766.00	Garvey Vineyard Management LLC	0.156	0.009	0.009	APCO	Napa
20MOY107	Marine	Equipment replacement	1	$ 109,000.00	Argo Sportfishing	1.031	0.016	0.036	2/6/2019	San Francisco
20MOY132	Off-road	Equipment replacement	1	$ 540,000.00	County Quarry Products, LLC	2.412	0.112	0.066	2/6/2019	Contra Costa
20MOY53	On-road	Equipment replacement	1	$ 20,000.00	Pars Trucking	0.644	0.097	0.005	APCO	Solano
20MOY111	On-road	Equipment replacement	1	$ 40,000.00	Jasvir Dosanjh	0.432	0.037	0.000	APCO	Placer
20MOY85	On-road	Equipment replacement	1	$ 40,000.00	Gurchetan Johal	0.403	0.034	0.003	APCO	Placer
20MOY81	On-road	Equipment replacement	1	$ 35,000.00	Bevin Thomas	0.366	0.031	0.002	APCO	Sacramento
20MOY92	On-road	Equipment replacement	1	$ 50,000.00	Sukhvir Singh Tatlah	0.506	0.037	0.003	APCO	Alameda
20MOY87	On-road	Equipment replacement	1	$ 30,000.00	Rajanpal Singh	0.329	0.028	0.002	APCO	Placer
20MOY108	On-road	Equipment replacement	1	$ 40,000.00	Sukhdev Singh Johal	0.402	0.034	0.003	APCO	Sacramento
20MOY135	Ag/ off-road	Equipment replacement	1	$ 38,235.00	Perry Kozlowski Ranch	0.117	0.015	0.010	APCO	Sonoma
20MOY134	Off-road	Engine replacement	8	$ 1,901,000.00	DeSilva Gates Construction	6.636	0.358	0.190	2/6/2019	Alameda
20MOY141	Off-road	Engine replacement	1	$ 111,000.00	Concord Iron Works, Inc.	0.308	0.034	0.021	2/6/2019	Contra Costa
20MOY126	Ag/ off-road	Equipment replacement	1	$ 134,000.00	Kabeela, Inc.	0.229	0.024	0.014	2/6/2019	Santa Clara
20MOY144	Ag/ off-road	Equipment replacement	1	$ 66,379.00	JPW Development Co., LLC	0.134	0.020	0.012	APCO	Solano
20MOY149	Locomotive	Locomotive replacement	1	$ 1,550,000.00	Napa Valley Wine Train, Inc.	4.855	0.159	0.110	2/6/2019 & 5/1/2019	Napa
20SBP140	School bus	Equipment replacement	5	$ 751,061.00	Sunnyvale School District	0.235	0.013	0.005	2/6/2019	Santa Clara

AGENDA 4 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY151	Ag/ off-road	Equipment replacement	1	$ 68,475.00	Bianchini Inc.	0.165	0.020	0.011	APCO	Marin
20MOY147	On-road	Equipment replacement	1	$ 40,000.00	Surjit Singh	1.162	0.241	0.000	APCO	Santa Clara
20MOY131	Ag/ off-road	Equipment replacement	1	$ 25,117.00	E & M Deniz Dairy	0.153	0.024	0.014	APCO	Sonoma
20MOY136	Ag/ off-road	Equipment replacement	1	$ 27,690.00	Hidden Gem Farms, LLC	0.024	0.023	0.006	APCO	Sonoma
20MOY125	Ag/ off-road	Equipment replacement	1	$ 41,900.00	O'Brien Family Vineyard LLC	0.199	0.031	0.018	APCO	Napa
20MOY61	On-road	Equipment replacement	1	$ 15,000.00	Lindsey Anderson Trucking Service	0.437	0.041	0.002	APCO	San Mateo
VBB FYE2019	VBB	Vehicle retirement program	tbd	$ 7,000,000.00	Pick n Pull, and Environmental Engineering, Services	TBD	TBD	TBD	3/6/2019	Regional
VBB FYE2019	VBB	Vehicle retirement outreach	tbd	$ 200,000.00	Direct Mail Center	TBD	TBD	TBD	3/6/2019	Regional
20MOY137	Ag/ off-road	Equipment replacement	1	$ 58,320.00	Dotti Bros. LLC	0.198	0.033	0.025	APCO	Sonoma
20MOY157	Ag/ off-road	Equipment replacement	1	$ 205,830.00	McClelland's Dairy	0.716	0.066	0.038	3/6/2019	Sonoma
20MOY159	Ag/ off-road	Equipment replacement	1	$ 186,400.00	Petaluma Pumpkin Patch, LLC	0.341	0.031	0.017	3/6/2019	Sonoma
20MOY102	Ag/ off-road	Equipment replacement	1	$ 18,420.00	Leonard Gianno (Farmer)	0.023	0.023	0.006	APCO	Solano
20MOY148	Marine	Engine replacement	1	$ 196,500.00	John Henry Mellor (Commercial fishing)	0.460	0.008	0.017	3/6/2019	San Francisco
20MOY3	Marine	Engine replacement	2	$ 97,000.00	Christopher Noel Smith, DBA, Captain Hook Sportfishing	0.947	-0.014	0.038	APCO	Alameda
20MOY90	Marine	Engine replacement	2	$ 156,000.00	Riverview Equipment Company LLC	0.274	0.000	0.015	3/6/2019	Solano
20MOY70	Marine	Engine replacement	2	$ 160,000.00	Bay Marine Services, LLC	1.490	0.029	0.047	3/6/2019	Solano
20SBP23	School bus	Equipment replacement	2	$ 361,692.00	Sonoma Valley Unified School District	0.131	0.009	0.001	3/6/2019	Sonoma
20MOY175	Locomotive	Equipment replacement	2	$ 7,400,000.00	California Department of Transportation	18.485	0.698	0.288	3/6/2019	Solano, Contra Costa, Alameda, Santa Clara

AGENDA 4 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY91	Marine	Engine replacement	2	$ 70,000.00	Riverview Equipment Company LLC	0.125	0.001	0.006	APCO	Solano
20MOY152	Marine	Engine replacement	1	$ 39,000.00	Patrick Lazzari (Commercial fishing)	0.078	0.001	0.003	APCO	San Francisco
20MOY163	Ag/ off-road	Equipment replacement	1	$ 32,920.00	Haire Management Co. LLC	0.130	0.023	0.013	APCO	Napa
20SBP75	School bus	Equipment replacement	4	$ 787,704.00	Napa Valley Unified School District	0.373	0.032	0.000	4/3/2019	Napa
20MOY158	Ag/ off-road	Equipment replacement	1	$ 58,900.00	Cortina Vineyard Management	0.105	0.007	0.007	APCO	Napa
20MOY156	Ag/ off-road	Equipment replacement	1	$ 65,000.00	Robert Giacomini Dairy, Inc	0.107	0.011	0.006	APCO	Marin
20MOY171	On-road	Equipment replacement	1	$ 25,000.00	ELG Trucking	0.715	0.094	0.004	APCO	Santa Clara
20MOY180	On-road	Equipment replacement	1	$ 27,000.00	Salvador Uribe dba/ Don Luis	0.269	0.019	0.001	APCO	Santa Clara
20MOY179	On-road	Equipment replacement	1	$ 13,000.00	Bayside Building Materials, Inc.	0.360	0.043	0.002	APCO	San Mateo
20MOY166	Ag/ off-road	Equipment replacement	5	$ 236,560.00	Freixenet Sonoma Caves Inc.	1.028	0.155	0.119	4/3/2019	Sonoma
20SBP169	School bus	CNG Tank Replacement	3	$ 60,000.00	West County Transportation Agency	0.000	0.000	0.000	APCO	Sonoma
20SBP187	School bus	Equipment replacement	7	$ 1,437,212.00	Ravenswood City School District	0.388	0.022	0.014	5/1/2019	San Mateo
20MOY181	On-road	Equipment replacement	3	$ 55,000.00	Zepeda's Trucking	0.533	0.043	0.003	APCO	Alameda
20MOY37	Off-road	Equipment replacement	1	$ 50,500.00	Sugar City Building Materials Company	0.134	0.020	0.012	APCO	Contra Costa
20MOY160	Ag/ off-road	Equipment replacement	2	$ 99,900.00	San Antonio Creek Vineyards	0.179	0.027	0.018	APCO	Solano
20MOY182	Marine	Engine replacement	2	$ 180,000.00	Pacific Pescador LLC (Commercial fishing)	1.171	0.011	0.047	5/1/2019	San Mateo
20MOY168	On-road	Equipment replacement	1	$ 45,000.00	Gurwinder Singh	1.214	0.182	0.009	APCO	Alameda

AGENDA 4 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY128	Off-road	Equipment replacement	2	$ 163,795.00	Coastside Lumber dba South City Lumber & Supply	0.728	0.127	0.029	5/1/2019	San Mateo
20MOY198	Marine	Engine replacement	2	$ 134,000.00	Amnav Maritime Corporation (Vessel: Sandra Hugh)	0.599	0.054	0.016	5/1/2019	Alameda
20MOY199	Marine	Engine replacement	2	$ 134,000.00	Amnav Maritime Corporation (Vessel: Revolution)	0.599	0.054	0.016	5/1/2019	Alameda
20SBP165	School bus	Equipment replacement	2	$ 379,500.00	West County Transportation Agency	0.140	0.006	0.000	5/1/2019	Sonoma
20SBP186	School bus	Equipment replacement	7	$ 1,352,217.00	Franklin-McKinley School District	0.461	0.030	0.003	5/1/2019	Santa Clara
20MOY77	Off-road	Equipment replacement	1	$ 73,969.00	Economy Lumber Company of Oakland, Inc.	0.093	0.019	0.002	APCO	Alameda
20MOY192	On-road	Equipment replacement	1	$ 26,000.00	Anit Kumar (Truck owner/operator)	0.283	0.024	0.000	APCO	Sacramento
20MOY202	Ag/ off-road	Equipment replacement	3	$ 163,910.00	Clos Du Val Wine Company, Ltd.	0.413	0.058	0.049	TBD	Napa
20MOY188	On-road	Equipment replacement	1	$ 15,000.00	SK Transportation, Inc.	0.171	0.014	0.000	APCO	Alameda
20MOY183	Ag/ off-road	Equipment replacement	1	$ 64,805.00	Chappellet Vineyard, LLC	0.131	0.008	0.008	APCO	Napa
20MOY193	Ag/ off-road	Equipment replacement	1	$ 34,530.00	Domenico J. Carinalli, Jr.	0.111	0.020	0.014	APCO	Sonoma
20MOY191	Ag/ off-road	Equipment replacement	1	$ 48,000.00	David Vella DBA Dave Vella Vineyard Mgt	0.051	0.005	0.007	APCO	Napa
20MOY196	Ag/ off-road	Equipment replacement	2	$ 107,225.00	Loma Del Sol Farming, Inc.	0.287	0.045	0.032	TBD	Sonoma
	117 Projects		**265**	**$ 51,597,405.00**		**102.621**	**6.272**	**3.829**		

AGENDA 4 - ATTACHMENT 3

Summary of all TFCA approved and eligible projects (evaluated between 7/1/18 and 5/3/19)

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board/ APCO Approval Date	CARE Area	County
					NO_X	ROG	PM			
18EV029	LD Infrastructure	Install and operate 16 single port Level 2 (high) charging stations at 1 workplace facility in Los Altos Hills	$48,000	Creative Center of Los Altos	0.026	0.034	0.001	10/30/18	No	Santa Clara
18EV035	LD Infrastructure	Install and operate 2 dual-port Level 2 (high) charging stations at 1 destination facility in Greenbrae	$8,000	Marin Rowing Association	0.004	0.006	0.000	7/31/18	No	Marin
18EV038	LD Infrastructure	Install and operate 1 single port Level 2 (high) and one 25 kW DC Fast charging stations with solar at 1 transportation corridor facility in Petaluma	$25,900	Solar Action Network	0.01	0.01	0.00	11/30/18	No	Sonoma
18EV047	LD Infrastructure	Install and operate 4 single port Level 2 (high) charging stations at 1 destination facility in San Mateo	$12,000	Nazareth Plaza Owners' Association	0.007	0.009	0.000	7/30/18	No	San Mateo
18EV049	LD Infrastructure	Install and operate 12 single-port Level 2 (high) charging stations at 6 destination facilities in San Mateo, Burlingame, San Bruno, and Millbrae	$36,000	San Mateo Union High School District	0.020	0.025	0.000	7/5/18	No	San Mateo
19EV002	LD Infrastructure	Install and operate 20 dual port level 2 (high) charging stations with solar at 1 destination facility in San Rafael	$84,000	San Rafael Airport LLC	0.037	0.055	0.001	4/5/19	No	Marin
19EV003	LD Infrastructure	Install and operate two 25kW DC Fast charging stations at 1 transportation corridor facility in San Francisco	$23,298	Union Investment Real Estate GmbH	0.008	0.012	0.002	4/5/19	Yes	San Francisco
19EV009	LD Infrastructure	Install and operate 2 dual port and 1 single port level 2 (high) charging stations at 1 workplace and 1 destination facility in Moraga	$11,000	Town of Moraga	0.005	0.008	0.000	5/1/19	No	Contra Costa
19EV006	LD Infrastructure	Install and operate twenty 50kW DC Fast charging stations at 7 transportation corridor facilities in San Francisco, Novato, Emeryville and San Jose	$500,000	EVGo Service, LLC	0.168	0.249	0.005	Pending	Yes	Multi-County
19RFG06 *	LD Infrastructure	Install and operate 43 dual port level 2 EV charging stations	$266,000	Hayward Unified School District	0.054	0.071	0.001	10/17/18	Yes	Alameda
19RFG13 *	LD Infrastructure	Install and operate ten 50kW DC fast charging stations	$389,400	EVgo Service, LLC	0.040	0.060	0.001	Pending	Yes	Alameda
19R02	LD Vehicles	Vehicle Buy Back Program	$150,000	BAAQMD	NA	NA	NA	NA	No	Regional
18R14	Bicycle Facilities	Install and maintain 3.62 miles of Class III bikeways in Petaluma	$48,500	City of Petaluma	0.007	0.009	0.014	8/6/18	No	Sonoma
18R18	Bicycle Facilities	Install and maintain 0.09 miles of Class I and 0.28 miles of Class IV bikeways in Los Gatos	$242,000	Town of Los Gatos	0.029	0.056	0.039	8/1/18	No	Santa Clara
18R20	Bicycle Facilities	Install and maintain 1.57 miles of Class II bikeways and 23 bike racks (2 bikes per rack)	$38,000	City of Gilroy	0.008	0.010	0.013	8/22/18	No	Santa Clara
18R21	Bicycle Facilities	Install and maintain 32 electronic bicycle lockers in Danville	$80,000	Town of Danville	0.012	0.015	0.023	8/7/18	No	Contra Costa
18R22	Bicycle Facilities	Install and maintain 16 electronic bicycle lockers in San Francisco	$32,000	San Francisco Community College District	0.004	0.006	0.007	8/22/18	No	San Francisco
19R01	Trip Reduction	Enhanced Mobile Source & Commuter Benefits Enforcement	$554,842	BAAQMD	0.722	0.806	1.171	NA	No	Regional
19R03	Trip Reduction	Spare The Air/Intermittent Control Programs	$2,305,927	BAAQMD	42.952	50.253	67.862	NA	No	Regional
19R10	Trip Reduction	Pleasanton Connector Shuttles	$80,000	San Joaquin Regional Rail Commission	0.234	0.387	0.647	10/18/18	Yes	Alameda
19R13	Trip Reduction	Juvenile Justice Center/ Fairmont Hospital Shuttle	$29,700	County of Alameda	0.011	0.040	0.058	10/18/18	Yes	Alameda

AGENDA 4 - ATTACHMENT 3

Summary of all TFCA approved and eligible projects (evaluated between 7/1/18 and 5/3/19)

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board/ APCO Approval Date	CARE Area	County
					NO_X	ROG	PM			
19R14	Trip Reduction	PresidiGO Downtown Shuttle	$100,000	Presidio Trust	0.252	0.352	0.471	11/7/2018	Yes	San Francisco
19R15	Trip Reduction	Caltrain Shuttle Program	$652,600	Peninsula Corridor Joint Powers Board	2.64	3.66	5.14	11/7/2018	No	Multi-County
19R16	Trip Reduction	ACE Shuttle Bus Program	$960,000	Santa Clara Valley Transportation Authority	2.43	2.60	4.29	11/7/2018	Yes	Santa Clara
19R17	Trip Reduction	Carpool incentive, vanpool subsidy, Spare the Air messaging and advertising	$3,000,000	Metropolitan Transportation Commission	NA	NA	NA	5/1/2019	No	Regional
19R18	Trip Reduction	SJSU Ridesharing & Trip Reduction	$139,500	Associated Students, San Jose State University	0.231	0.266	0.366	11/7/2018	No	Multi-County
19R22	Trip Reduction	Union City Transit Microtransit Pilot	$663,229	City of Union City - Union City Transit	0.182	0.212	0.304	5/1/2019	No	Alameda
19R23	Trip Reduction	GoTriValley On-Demand Shared-Ride Service	$257,000	Livermore Amador Valley Transit Authority	0.135	0.135	0.228	5/1/2019	Yes	Alameda
19R25	Trip Reduction	First- and last-mile services to Walnut Creek BART	$1,448,116	Bay Area Rapid Transit District	0.395	0.398	0.669	5/1/2019	Yes	Contra Costa
19RFG04*	Off-road (non-ag)	Purchase and operate 5 electric forklifts, 1 electric vacuum unit, and 1 electric terminal truck	$221,000	Wyse Logistics	0.107	0.015	0.008	10/17/18	Yes	Alameda
19RFG15*	Off-road (non-ag)	Purchase and operate six electric yard hostlers	$600,000	Rail Management Services, LLC	0.375	0.015	0.022	Pending	Yes	Alameda
	31 Projects*		**$13,006,012**		**51.104**	**59.776**	**81.344**			

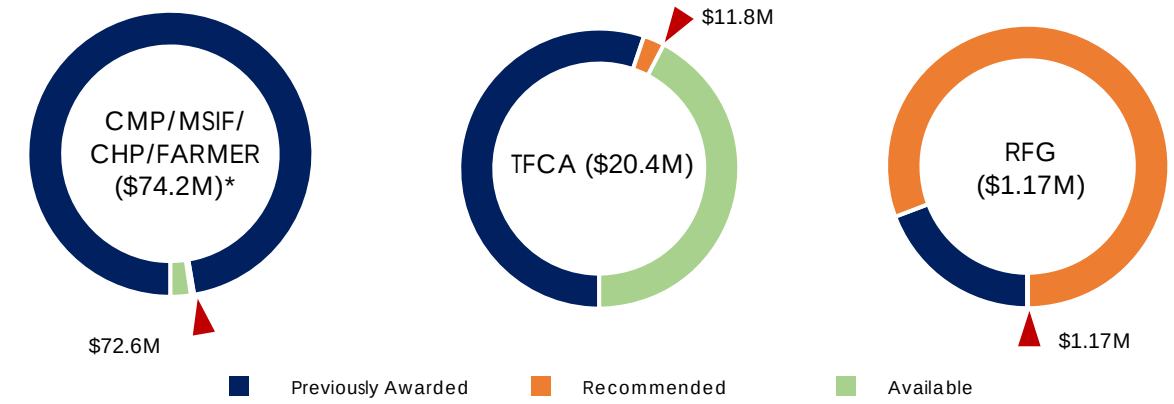
* The award amounts for these projects include a total of $1,225,000 of Reformulated Gasoline Settlement (RFG) funds.

AGENDA 4 - ATTACHMENT 4

Figures 1-3 shown below summarize funding awarded between 7/1/18 and 5/3/19 from funding sources including:

- Carl Moyer Program (CMP)
- Community Health Protection Program (CHP)
- Funding Agricultural Replacement Measures for Emission Reductions (FARMER)
- Mobile Source Incentive Fund (MSIF)
- Transportation Fund for Clean Air (TFCA)
- Reformulated Gasoline Settlement Fund (RFG)

Figure 1. Status of FYE2019 funding by source



* Includes awards from FYE 2018

Figure 2. Funding awarded in FYE2019 by county

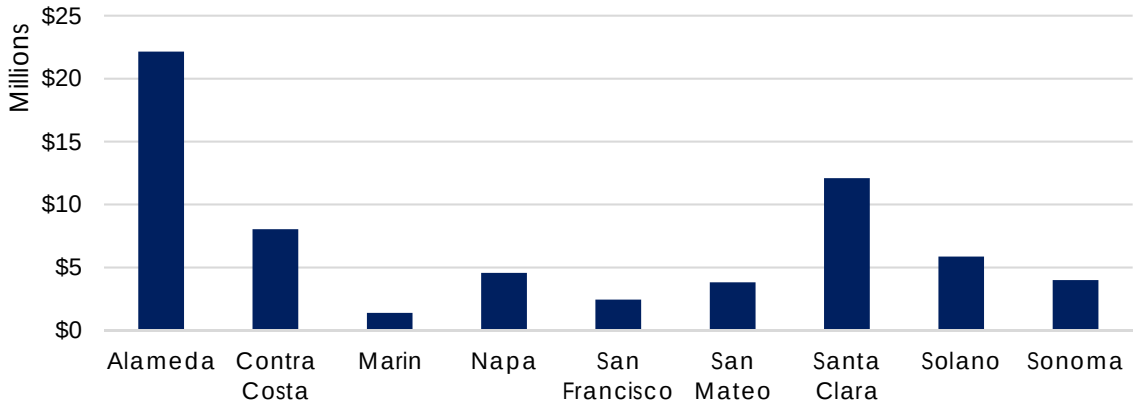


Figure 3. Funding awarded in FYE2019 by project category

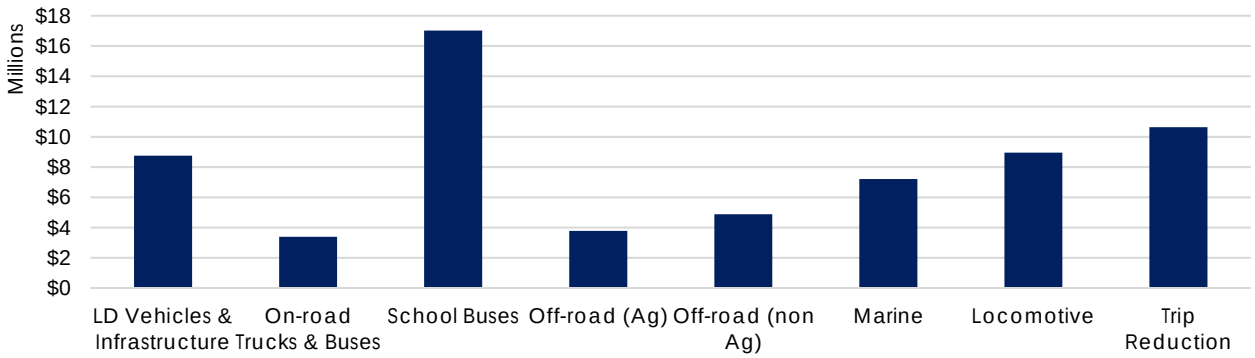


Figure 4. CMP/MSIF/CHP/FARMER funding awarded since 2009 by county

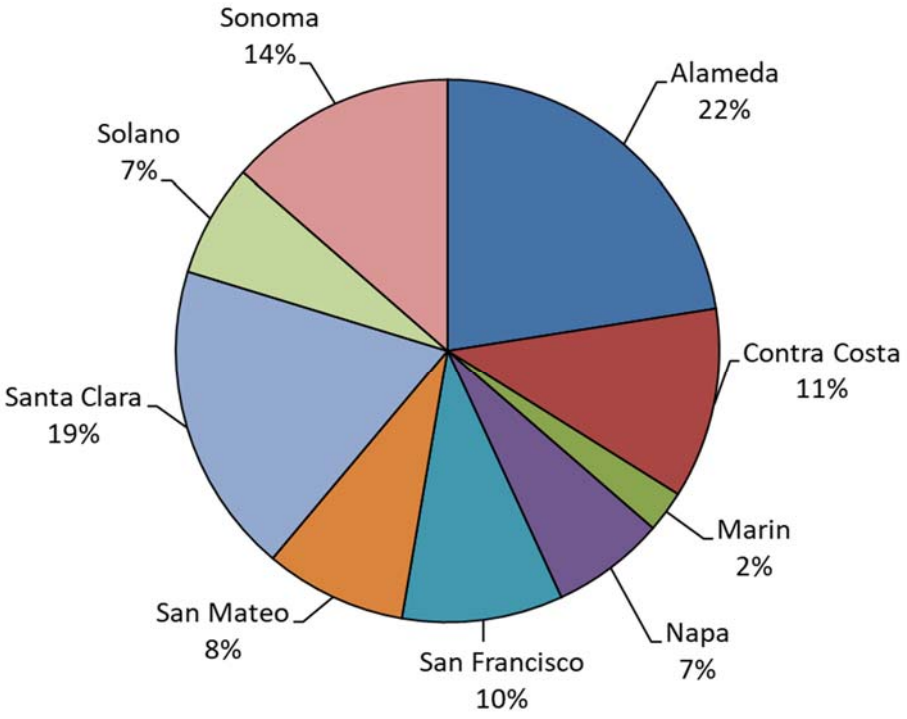
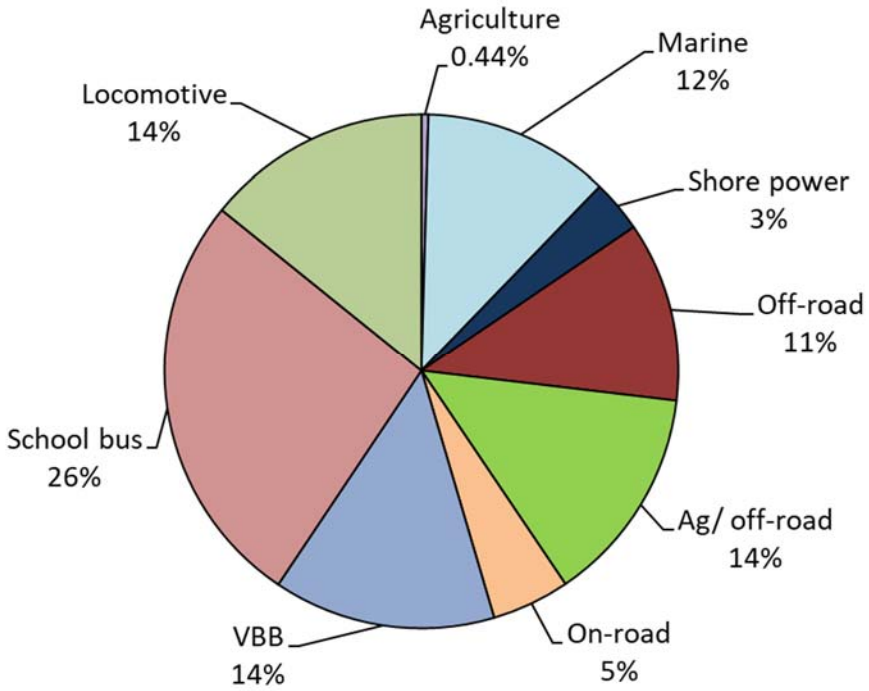


Figure 5. CMP/MSIF/CHP/FARMER funding awarded since 2009 by category



BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson David Canepa and Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 13, 2019

Re: Fiscal Year Ending (FYE) 2020 Transportation Fund for Clean Air (TFCA) Regional Fund Policies & Evaluation Criteria

RECOMMENDED ACTION

Recommend Board of Directors:

1. Approve the proposed FYE 2020 TFCA Regional Fund Policies and Evaluation Criteria presented in Attachment A, and

2. Approve a change to FYE 2020 TFCA County Program Manager Fund Policies to increase the cost-effectiveness threshold for the Bicycle Projects category such that it is aligned with the threshold that is proposed for the FYE 2020 TFCA Regional Fund Policies.

BACKGROUND

In 1991, the California State Legislature authorized the Bay Area Air Quality Management District (Air District) to impose a $4 surcharge on each motor vehicle registered within the nine-county Bay Area to fund projects that reduce on-road motor vehicle emissions within the Air District's jurisdiction. The statutory authority for the Transportation Fund For Clean Air (TFCA) and requirements of the program are set forth in California Health and Safety Code Sections 44241 and 44242. The authorizing legislation requires that the Air District's Board of Directors (Board) adopt cost-effectiveness criteria that govern the use of the TFCA funds.

Sixty percent of the TFCA funds are allocated by the Board to eligible projects and programs implemented directly by the Air District (e.g., Spare the Air, Charge! Program) and to a program referred to as the TFCA Regional Fund. The remaining forty percent (40%) of TFCA funds are passed-through to the County Program Manager Fund, based on each county's proportionate share of vehicle registration fees paid, and awarded by the nine designated agencies within the Air District's jurisdiction.

On April 3, 2019, the Board approved an allocation of $14 million in new TFCA monies to three program categories, including trip reduction, clean air vehicles, and other Air District sponsored programs for FYE 2020. An estimated $32.30 million in TFCA funds, including both the new funds and carryover from projects that have been cancelled or completed under budget, will be

available in FYE 2020. At the same meeting, the Board also authorized the Executive Officer/APCO to execute grant agreements with project sponsors who propose projects with individual grant award amounts of up to $100,000 for projects that meet the respective governing policies and guidelines. TFCA Regional Fund projects with grant award amounts over $100,000 are brought to the Air District's Mobile Source Committee for consideration at least on a quarterly basis.

Every year, the Board adopts updated TFCA Regional Fund Policies and Evaluation Criteria (Policies), which guide the evaluation and award of TFCA Regional Fund projects. The Policies include both general requirements that are applicable to all TFCA Regional Fund projects, as well as specific requirements for each project category. This report discusses the proposed updates to the Policies for FYE 2020 and the public process, through which these updates were developed.

DISCUSSION

Public Outreach Process

For FYE 2020, the proposed updates to the prior year Policies reflect feedback received from stakeholders over the past year. On April 8, 2019, the Air District posted the Policies with proposed updates on the Air District's website and opened the public comment period. The public comment process was advertised via the Air District's TFCA grants email notification system, which was sent to more than 2,000 stakeholders, including representatives from each of the nine Bay Area Congestion Management Agencies (CMAs). One webinar workshop was held on May 1, 2019 to discuss the proposed changes for FYE 2020 and was attended by four stakeholders. Additional meetings were held with the CMAs. Attachment C provides a summary of the public comments received, along with staff's response.

Proposed Updated Policies for FYE 2020

For FYE 2020, proposed updates were made to the Policies to address the comments and suggestions received during the public outreach process. Language and grammatical revisions were also made for clarification purposes.

A redlined copy of the Policies for FYE 2020, which shows the proposed updates to the Policies, is included as Attachment B. Below is a summary of the key proposed updates:

- **Policy #2. Cost-Effectiveness (C-E):** Raise the C-E threshold for zero- and partial-zero-emission cars, trucks and buses, pilot trip reduction, and bikeway projects from $250,000 to $500,000 per ton of criteria emissions reduced. Also, included a cost-effectiveness for a newly proposed project category—Vehicle Scrapping.

- **Policy #20. Administrative Costs:** Raise maximum administrative costs from 5% to 6.25% to be consistent with California Health and Safety Code Section 44233.

- **Policy #22. On-Road Truck Replacements**: Remove buses from this policy such that this policy would help to support diesel-to-diesel replacement of highly-polluting on-road trucks that are not currently able to transition to zero-emissions technology. Also, Policy #24 was revised to clarify that zero- and near-zero emissions bus projects are eligible for funding.

- **Policy #23. Light- and Medium- Duty Zero- and Partial-Zero-Emissions Vehicles for Fleets *and* Policy #24. On-Road Heavy-Duty Zero- and Partial-Zero-Emissions Trucks and Buses:** Remove the requirement that vehicles must be the latest model year in order to make previous model year new vehicles eligible. And, for Policy #24, clarify that eligible vehicles include both trucks and buses.

- **Policy #26. Vehicle Scrapping:** Add this new policy to accelerate the removal of highly polluting vehicles from Bay Area roads by providing funding to owners of on-road motor vehicles who voluntarily scrap old, polluting vehicles that are not eligible for funding from other Air District programs or other public agencies.

- **Policy #29. Pilot Trip Reduction:** Remove the requirement that projects must be located in an Air District Community Air Risk Evaluation (CARE) Program or in a Priority Development Area (PDA). The evaluation criteria require prioritization of funding for projects in CARE areas and PDAs.

In addition, staff is also recommending a change to the FYE 2020 TFCA County Program Manager (CPM) Fund Policies to increase the cost-effectiveness threshold for the Bicycle Projects category. This request would align the CPM's cost-effectiveness threshold with the recommended threshold for the FYE 2020 Regional Fund Policies and addresses input received from CPMs.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None. TFCA funds are generated from DMV registration fees and distributed to sponsors of eligible projects on a reimbursement basis. Administrative costs are also covered by TFCA.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Chengfeng Wang, Sean Newlin, and Ken Mak
Reviewed by: Karen Schkolnick

Attachment A: Proposed TFCA Regional Fund Policies and Evaluation Criteria for FYE 2020 (Clean)
Attachment B: Proposed TFCA Regional Fund Policies and Evaluation Criteria for FYE 2020 (Redline)
Attachment C: Comments Received and Staff Responses to Proposed FYE 2020 Policies

TFCA REGIONAL FUND POLICIES AND EVALUATION CRITERIA FOR FYE 2020

The following policies apply to the Bay Area Air Quality Management District's (Air District) Transportation Fund for Clean Air (TFCA) Regional Fund for fiscal year ending (FYE) 2020.

BASIC ELIGIBILITY

1. **Eligible Projects:** Only projects that result in the reduction of motor vehicle emissions within the Air District's jurisdiction are eligible. Projects must conform to the provisions of the California Health and Safety Code (HSC) sections 44220 et seq. and Air District Board of Directors adopted TFCA Regional Fund Policies and Evaluation Criteria.

   Projects must achieve surplus emission reductions, i.e., reductions that are beyond what is required through regulations, contracts, and other legally binding obligations at the time the Air District executes the project's funding agreement.

2. **TFCA Cost-Effectiveness:** Projects must not exceed the maximum cost-effectiveness (C-E) limit specified in Table 1. Cost-effectiveness ($/weighted ton) is the ratio of TFCA funds awarded to the sum of surplus emissions reduced, during a project's operational period, of reactive organic gases (ROG), nitrogen oxides (NOx), and weighted PM10 (particulate matter 10 microns in diameter and smaller).

   Table 1: Maximum Cost-Effectiveness for TFCA Regional Fund Projects

Policy #	Project Category	Maximum C-E ($/weighted ton)
22	On-Road Truck Replacements	$90,000
23	Light- and Medium-Duty Zero- and Partial-Zero-Emissions Vehicles for Fleets	$500,000
24	On-Road Heavy-Duty Zero- and Partial-Zero-Emissions Trucks and Buses	$500,000
25	Hydrogen Stations	$500,000
26	Vehicle Scrapping	$50,000
27	Reserved	Reserved
28	Existing Shuttle/Feeder Bus Services	$200,000; $250,000 for services in CARE Areas or PDAs
29	Pilot Trip Reduction	$500,000
30	Existing Regional Ridesharing Services	$150,000
31	Electronic Bicycle Lockers	$250,000
32	Bikeways	$500,000

3. **Consistent with Existing Plans and Programs:** All project categories must comply with the Transportation Control and Mobile Source Control Measures included in the Air District's most recently approved strategy(ies) for achieving and maintaining State and national ozone standards; those plans and programs established pursuant to California Health & Safety Code (HSC) sections 40233, 40717 and 40919; and, when specified, other adopted federal, State, regional, and local plans and programs.

4. **Eligible Recipients and Authority to Apply:** Applicants must have the legal authority, as well as the financial and technical capability, to complete projects. In addition, the following conditions apply:
   a. **Eligible Recipients**:
      i. **Public agencies** are eligible to apply for all project categories.
      ii. **Non-public entities** are only eligible to apply for Clean Air Vehicle Projects and advanced technology demonstrations that are permitted pursuant to HSC section 44241b(7).

   b. **Authority to Apply:** Applicants must demonstrate that they have the authority to submit the application, to enter into a funding agreement, to carry out the project, and to bind the entity to perform these tasks by including either: 1) a signed letter of commitment from the applicant's representative with authority (e.g., Chief Executive or Financial Officer, Executive Director, or City Manager); or 2) a signed resolution from the governing body (e.g., City Council, Board of Supervisors, or Board of Directors).

5. **Viable Project and Matching Funds:** Applicants must demonstrate that they have adequate funds to cover all stages of their proposed project(s) from commencement through completion. Unless otherwise specified in policies #22 through 32, project applicants must demonstrate evidence that they have at least 10% of the total eligible project costs (matching funds) from a non-Air District source available and ready to commit to the proposed projects.
6. **Minimum Grant Amount:** $10,000 per project.
7. **Maximum Grant Amount:** Unless otherwise specified in policies #22 through 32, the maximum grant award amounts are:
   a. Each public agency may be awarded up to $1,500,000 per calendar year; and
   b. Each non-public entity may be awarded up to $500,000 per calendar year.
8. **Readiness:** Unless otherwise specified in policies #22 through 32, projects must commence by the end of calendar year 2020 or within 12 months from the date of execution of the funding agreement with the Air District, whichever is later. For purposes of this policy, "commence" means a tangible preparatory action taken in connection with the project's operation or implementation, for which the project sponsor can provide documentation of the commencement date and action performed. "Commence" includes, but is not limited to, the issuance of a purchase order to secure project vehicles and equipment; commencement of shuttle/feeder bus and ridesharing service; or the delivery of the award letter for a construction contract.
9. **Maximum Two Years Operating Costs for Service-Based Projects:** Unless otherwise specified in policies #22 through 32, TFCA Regional Funds may be used to support up to two years of operating costs for service-based projects (i.e., Trip Reduction Projects).
10. **Project Revisions:** The Air District will consider only requests for modifications to approved projects that are within the same project categories, achieve the same or better cost-effectiveness, comply with all TFCA Regional Fund Policies, and are in compliance with all applicable federal and State laws, and Air District rules and regulations. The Air District may also approve minor modifications, such as to correct typographical mistakes in the grant agreements or to change the name of the grantees, without re-evaluating the proposed modification in light of the regulations, contracts, and other legally-binding obligations that are in effect at the time the minor modification was proposed.

APPLICANT IN GOOD STANDING

11. **In Compliance with Air Quality Regulations:** Applicants must certify that, at the time of the application and at the time of issuance of the grant, they are in compliance with all local, State, and federal air quality regulations. Applicants who are in compliance with those laws, rules and regulations, but who have pending litigation or who have unpaid civil penalties owed to the Air District, may be eligible for funding, following a review and approval by the Air District. The Air District may terminate a grant agreement and seek reimbursement of distributed funds from the project sponsor who was not eligible for funding at the time of the grant.
12. **In Compliance with Agreement Requirements:** Project sponsors who have failed to meet contractual requirements such as project implementation milestones or monitoring and reporting requirements for any project funded by the Air District may not be considered eligible for new funding until such time as all of the unfulfilled obligations are met.
13. **Independent Air District Audit Findings and Determinations:** Project sponsors who have failed either a fiscal audit or a performance audit for a prior Air District funded project will be excluded from future funding for three (3) years from the date of the Air District's final determination in accordance with HSC

section 44242. Additionally, project sponsors with open projects will not be reimbursed until all audit recommendations and remedies have been satisfactorily implemented.

A failed fiscal audit means an uncorrected audit finding that confirms an ineligible expenditure of funds. A failed performance audit means that a project was not implemented as set forth in the project funding agreement.

Project sponsors must return funds under any of the following circumstances:

a. The funds were expended in a manner contrary to the TFCA Regional Funds' requirements and/or requirements of HSC Code section 44220 et seq.;
b. The project did not result in a surplus reduction of air pollution from the mobile sources or transportation control measures pursuant to the applicable plan;
c. The funds were not spent for surplus reduction of air pollution pursuant to a plan or program to be implemented by the TFCA Regional Fund;
d. The project sponsor failed to comply with the approved project scope, as set forth in the project funding agreement.

Applicants who failed to reimburse such funds to the Air District from prior Air District funded projects will be excluded from future TFCA funding.

14. **Executed Funding Agreement:** Only a fully-executed funding agreement (i.e., signed by both the project sponsor and the Air District) constitutes the Air District's award of funds for a project. Approval of an application for the project by the Air District Board of Directors or Air District's notices such as a transmittal letter announcing the proposed award do not constitute a final obligation on the part of the Air District to fund a project.

    Applicants must sign funding agreements within 60 days from the date the agreements were transmitted to them in order to remain eligible for award of TFCA Regional Funds. Applicants may request, in writing, an extension of up to no more than 180 days from the transmittal date to sign the grant agreements. The request shall include the basis for an extended signature period. At its discretion, the Air District may authorize such an extension.

15. **Maintain Appropriate Insurance:** Project sponsors must obtain and maintain general liability insurance and additional insurance that is appropriate for its specific project type throughout the life of the project, with coverage being no less than the amounts specified in the respective funding agreement. Project sponsors shall require their subcontractors to obtain and maintain such insurance of the type and in the amounts required by the grant agreements.

INELIGIBLE PROJECTS

16. **Planning Activities:** The costs of preparing or conducting feasibility studies are not eligible. Other planning activities may be eligible, but only if the activities are both: 1) directly related to the implementation of a specific project or program, and 2) directly contribute to the project's emissions reductions.
17. **Cost of Developing Proposals and Grant Applications:** The costs to prepare grant applications are not eligible.
18. **Duplication:** Projects that have previously received TFCA Regional or County Program Manager funds and do not propose to achieve additional emission reductions are not eligible.

USE OF TFCA FUNDS

19. **Combined Funds:** Unless otherwise specified in policies #22 through 32, TFCA County Program Manager Funds may not be combined with TFCA Regional Funds to fund a TFCA Regional Fund project.

20. **Administrative Costs:** Unless otherwise specified in policies #22 through 32, TFCA Regional Funds may not be used to pay for administrative costs (i.e., the costs associated with administering a TFCA Regional Fund grant). In cases where administrative costs may be paid for by TFCA Regional Funds, they are limited to a maximum of 6.25% of total TFCA Regional Funds expended on a project and are only available to projects sponsored by public agencies. To be eligible for reimbursement, administrative costs must be clearly identified in the project budget at the time of application and in the funding agreement between the Air District and the project sponsor.
21. **Expend Funds within Two Years:** Project sponsors must expend the grant funding within two (2) years of the effective date of their grant agreement. Applicants may request a longer period in the application, by submitting evidence that a longer period is justified to complete the project due to its unique circumstance. Project sponsors may request a longer period before the end of the agreements' second year in the event that significant progress has been made in the implementation of the project. If the Air District approves a longer period, the parties shall memorialize the approval and length of the extension formally (i.e., in writing) in the grant agreement or in an amendment to the executed grant agreement.

ELIGIBLE PROJECT CATEGORIES

To be eligible for funding from the TFCA Regional Fund, a proposed project must meet the purposes and requirements for the particular category's type of project.

Clean Air Vehicle Projects

22. **On-Road Truck Replacements:** The project will replace Class 6, Class 7, and Class 8 diesel-powered trucks that have a gross vehicle weight rating (GVWR) of 19,501 lbs. or greater (per vehicle weight classification definition used by Federal Highway Administration (FHWA)) with new or used trucks that have an engine certified to the 2010 California Air Resources Board (CARB) emissions standards or cleaner. The existing truck(s) to be replaced must be registered with the California Department of Motor Vehicles (DMV) to an address within the Air District's jurisdiction and must be scrapped after replacement.
23. **Light-and Medium- Duty Zero- and Partial-Zero-Emissions Vehicles for Fleets:** The project will accelerate the deployment of zero- and partial-zero-emissions motorcycles, cars, and light- and medium-duty vehicles:

    a. Each project (fleet deployment) must consist of the purchase or lease of three or more new vehicles registered to a single owner;
    b. Vehicles must have a GVWR not exceeding 14,000 lbs.;
    c. Each car and truck must be maintained and operated within the Air District's jurisdiction for a minimum of three years and 15,000 miles. All other vehicle types must be maintained and operated within the Air District's jurisdiction for a minimum of three years and 9,000 miles;
    d. Eligible vehicle types include plug-in hybrid-electric, plug-in electric, and fuel cell vehicles approved for on-road use by the CARB;
    e. Project Sponsors may request authorization of up to 100% of the TFCA Funds awarded for each vehicle to be used to pay for costs directly related to the purchase and installation of alternative fueling infrastructure and/or equipment used to power the new vehicle;
    f. Projects that seek to scrap and replace a vehicle may qualify for additional TFCA funding toward the purchase or lease of a new vehicle. Costs related to the scrapping and/or dismantling of the existing vehicle are not eligible for reimbursement with TFCA funds;
    g. Vehicles that are solely powered by gasoline, natural gas, or diesel, and retrofit projects are not eligible; and
    h. The total amount of TFCA funds awarded combined with all other grants and applicable manufacturer and local/State/federal rebates and discounts may not exceed 90% of the project's eligible cost.

24. **On-Road Heavy-Duty Zero- and Partial-Zero-Emissions Trucks and Buses**: The project will help fleet operators achieve significant voluntary emission reductions by encouraging the replacement of older, compliant trucks and buses with the cleanest available technology, and help fleet operators who are expanding their fleet to choose the cleanest available technology:
    a. Each vehicle must be new and have a GVWR greater than 14,000 lbs.;
    b. Vehicles may be purchased or leased;
    c. Each vehicle must be maintained and operated within the Air District's jurisdiction for a minimum of three years and 15,000 miles;
    d. Eligible vehicles must be approved by the CARB;
    e. Project Sponsors may request authorization of up to 100% of the TFCA Funds awarded for each vehicle to be used to pay for costs directly related to the purchase and installation of alternative fueling infrastructure and/or equipment used to power the new vehicle;
    f. Projects that seek to scrap and replace a vehicle may qualify for additional TFCA funding toward the purchase or lease of a new vehicle. Costs related to the scrapping and/or dismantling of the existing vehicle are not eligible for reimbursement with TFCA funds;
    g. Vehicles that are solely powered by gasoline, natural gas, or diesel, and retrofit projects are not eligible; and
    h. The total amount of TFCA funds awarded combined with all other grants and applicable manufacturer and local/State/federal rebates and discounts may not exceed 90% of the project's eligible cost.

25. **Hydrogen Stations:** The project is intended to accelerate the deployment of hydrogen fueling stations. Funding may be used for the purchase and installation of equipment for new dispensing facilities and for upgrades and improvements that expand access to existing refueling sites. The following additional conditions must also be met:
    a. Stations must be located within the Air District's jurisdiction and be available and accessible to the public;
    b. Equipment and infrastructure must be designed, installed, and maintained as required by the existing recognized codes and standards and approved by the local/State authority; and
    c. Each station must be maintained and operated for a minimum of three years.
    d. TFCA funding may not be used to pay for fuel or on-going operations and maintenance costs.
    e. TFCA funding is limited to 25% of the total eligible project cost and may not exceed a maximum award amount of $250,000 per station.
    f. Stations must have received a passing score and/or received approval for funding from a State or federal agency.

26. **Vehicle Scrapping:** The project is intended to accelerate the removal of highly polluting vehicles, including cars, motorcycles, trucks and buses from Bay Area roads. Funding will be provided to owners of eligble on-road motor vehicles who voluntarily scrap vehicles that meet the following requirements:
    a. Vehicles must be roadworthy and pass an inspection by the Air District or its designee.
    b. Vehicles must be currently registered with the DMV to an address within the Air District's jurisdiction and have had continuous registration to the same owner for a minimum of two years.
    c. Vehicles are not eligible for funding from other Air District programs or other public agencies.

27. **Reserved.**

<u>Trip Reduction Projects</u>

28. **Existing Shuttle/Feeder Bus Services:** The project will reduce single-occupancy vehicle commute-hour trips by providing the short-distance connection between a mass transit hub and one or more definable commercial hubs or employment centers:

a. The service must provide direct service connections between a mass transit hub (e.g., a rail or Bus Rapid Transit (BRT) station, ferry or bus terminal, or airport) and a distinct commercial or employment location;
b. The service's schedule must be coordinated to have a timely connection with the corresponding mass transit service;
c. The service must be available for use by all members of the public;
d. TFCA Regional Funds may be used to fund only shuttle services to locations that are under-served and lack other comparable service. For the purposes of this policy, "comparable service" means that there exists, either currently or within the last three years, a direct, timed, and publicly accessible service that brings passengers to within one-third (1/3) mile of the proposed commercial or employment location from a mass transit hub. A proposed service will not be deemed "comparable" to an existing service if the passengers' proposed travel time will be at least 15 minutes shorter and at least 33% shorter than the existing service's travel time to the proposed destination;
e. **Reserved.**
f. TFCA Regional Funds may be used to fund services only during commuter peak-hours, i.e., 5:00-10:00 AM and/or 3:00-7:00 PM;
g. Matching funds must be provided to cover at least 10% of the total project cost and must include only direct operational costs. Administrative costs are not eligible for use as matching funds. For shuttle/feeder bus service projects, the total project cost is the sum of direct operational costs (i.e., shuttle driver wages and fuel) of the project;
h. Project Sponsors must be either: (1) a public transit agency or transit district that directly operates the shuttle/feeder bus service, or (2) a city, county, or any other public agency;
i. Applicants must submit a letter of concurrence from all transit districts or transit agencies that provides service in the area of the proposed route, certifying that the service does not conflict with existing service; and
j. Projects that would operate in Highly Impacted Communities or Episodic Areas as defined in the Air District Community Air Risk Evaluation (CARE) Program, or in Priority Development Areas (PDAs), may qualify for funding at a higher cost-effectiveness limit (see Policy #2).

29. **Pilot Trip Reduction:** The project will reduce single-occupancy commute-hour vehicle trips by encouraging mode-shift to other forms of shared transportation. Pilot projects are defined as projects that serve an area where no similar service was available within the past three years, or will result in significantly expanded service to an existing area. Funding is designed to provide the necessary initial capital to a public agency for the start-up of a pilot project so that by the end of the third year of the trip reduction project's operation, the project will be financially self-sustaining or require minimal public funds, such as grants, to maintain its operation:

a. Applicants must demonstrate the project will reduce single-occupancy commute-hour vehicle trips and result in a reduction in emissions of criteria pollutants;
b. The proposed service must be available for use by all members of the public;
c. Applicants must provide a written plan documenting steps that would be taken to ensure that the project will be financially self-sustaining or require minimal public funds to maintain its operation by the end of the third year;
d. If the local transit provider is not a partner, the applicant must demonstrate that they have attempted to have the service provided by the local transit agency. The transit provider must have been given the first right of refusal and determined that the proposed project does not conflict with existing service;
e. Applicants must provide data and/or other evidence demonstrating the public's need for the service, including a demand assessment survey and letters of support from potential users;

Pilot trip reduction projects that propose to provide shuttle/feeder bus and ridesharing service projects must comply with all applicable requirements in policies #28 and #30

30. **Existing Regional Ridesharing Services:** The project will provide carpool, vanpool, and other rideshare services. For TFCA Regional Fund eligibility, ridesharing projects must be comprised of riders from at least five counties within Air District's jurisdiction, with no one county accounting for more than 80% of all riders, as verified by documentation submitted with the application.

    If a project includes ride-matching services, *only* ride-matches that are not already included in the Metropolitan Transportation Commission's (MTC) regional ridesharing program are eligible for TFCA Regional Funds. Projects that provide a direct or indirect financial transit or rideshare subsidy are also eligible under this category. Applications for projects that provide a direct or indirect financial transit or rideshare subsidy *exclusively* to employees of the project sponsor are not eligible.

Bicycle Projects

31. **Electronic Bicycle Lockers:** The project will expand the public's access to new electronic bicycle lockers. The project must be included in an adopted countywide bicycle plan, Congestion Management Plan (CMP), or the Metropolitan Transportation Commission's Regional Bicycle Plan, and must serve a major activity center (e.g. transit station, office building, or school). The electronic bicycle lockers must be publicly accessible and available for use by all members of the public.

    TFCA Regional Funds may not be used to pay for costs for maintenance, repairs, upgrades, rehabilitation, operations, and project administration.

    The maximum award amount is based on the number of lockers, at the rate of $2,500 per locker, for example, a quad contains four lockers and would be eligible for a maximum award amount of $10,000.

    Monies expended by the Project Sponsor to maintain, repair, upgrade, rehabilitate, or operate the electronic lockers are not eligible for use as matching funds.

32. **Bikeways:** The project will construct and/or install bikeways that are included in an adopted countywide bicycle plan, Congestion Management Plan (CMP), countywide transportation plan (CTP), city general plan or area-specific plan, or the Metropolitan Transportation Commission's Regional Bicycle Plan. To be eligible for funding, the purpose of bikeways that are included in an adopted city general plan or area-specific plan must be to reduce motor vehicle emissions or traffic congestion. Projects must have completed all applicable State and federal environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement.

    All bikeway projects must, where applicable, be consistent with design standards published in the California Highway Design Manual or conform to the provisions of the Protected Bikeway Act of 2014.

    Projects must reduce vehicle trips made for utilitarian purposes (e.g., work or school commuting) and cannot be used exclusively for recreational use. Projects must also meet at least one of the following conditions:

    a. Be located within one-half mile biking distance from the closer of a public transit station/stop (e.g., local, county- wide or regional transit stops/stations/terminals) or a bike share station;
    b. Be located within one-half mile biking distance from a major activity center that serves at least 2,500 people per day (e.g., employment centers, schools, business districts);
    c. Be located within one-half mile biking distance from three activity centers (e.g., employment centers, schools, business districts).

    Projects are limited to the following types of bikeways:

    a. Class I Bikeway (Bike Path), new or upgrade improvement from Class II or Class III bikeway;
    b. New Class II Bikeway (Bike Lane);
    c. New Class III Bikeway (Bike Route); or
    d. Class IV Bikeway (Separated Bikeway), new or upgrade improvement from Class II or Class III bikeway.

REGIONAL FUND EVALUATION CRITERIA:

1. Projects must meet all of the applicable TFCA Regional Fund policies.
2. Applications will also be evaluated using the evaluation process listed in Table 2:

Table 2: Evaluation Process by Project Category

Policy #	Project Category	Evaluation Process
22	On-Road Truck Replacements	Applications will be reviewed on a first-come, first-served basis, and funding amounts for eligible projects will be determined based on a project's cost-effectiveness and conformity to their respective project specific Policy requirements.
23	Light- and Medium-Duty Zero- and Partial-Zero- Emissions Vehicles for Fleets	
24	On-Road Heavy-Duty Zero- and Partial-Zero- Emissions Trucks and Buses	
25	Hydrogen Stations	Applications will be reviewed after the submittal deadline and eligible projects will be ranked based on their cost-effectiveness score and conformity to Policy #25.
26	Vehicle Scrapping	Applications will be reviewed on a first-come, first-served basis and eligible projects will be recommended for funding until funding has been depleted.
27	Reserved	Reserved
28	Existing Shuttle/Feeder Bus Services	Applications will may be reviewed on either a first-come, first-served basis or a competitive basis after the submittal deadline. Eligible projects will be evaluated based on their cost-effectiveness score and conformity to their respective project specific Policy requirements. In the case of a competitive solicitation, projects will also be ranked based on their potential to expand access to 1st and last mile connections to regional or county-wide transit stops/stations/terminals (e.g., BART, Caltrain, Capitol Corridor, ferry terminals) and bike share stations.
29	Pilot Trip Reduction	
30	Existing Regional Ridesharing Services	
31	Electronic Bicycle Lockers	Applications will be reviewed on a first-come, first-served basis and eligible projects will be recommended for funding until funding has been depleted.
32	Bikeways	Applications may be reviewed on either a first-come, first-served basis or a competitive basis after the submittal deadline. Eligible projects will be evaluated based on their cost-effectiveness score and conformity to Policy #32. In the case of a competitive solicitation, projects will also be ranked based on their potential to expand access to 1st and last mile connections to regional or county-wide transit stops/stations/terminals (e.g., BART, Caltrain, Capitol Corridor, ferry terminals) and bike share stations.

3. Up to sixty percent (60%) of TFCA Regional Funds will be prioritized for projects that meet one or more of the following criteria:
   a. Projects in Highly Impacted Communities or Episodic Areas as defined in the Air District Community Air Risk Evaluation (CARE) Program;
   b. Projects in Priority Development Areas (PDAs).

TFCA REGIONAL FUND POLICIES AND EVALUATION CRITERIA FOR FYE ~~2019~~2020

The following policies apply to the Bay Area Air Quality Management District's (Air District) Transportation Fund for Clean Air (TFCA) Regional Fund for fiscal year ending (FYE) ~~2019~~2020.

BASIC ELIGIBILITY

1. **Eligible Projects:** Only projects that result in the reduction of motor vehicle emissions within the Air District's jurisdiction are eligible. Projects must conform to the provisions of the California Health and Safety Code (HSC) sections 44220 et seq. and Air District Board of Directors adopted TFCA Regional Fund Policies and Evaluation Criteria.

   Projects must achieve surplus emission reductions, i.e., reductions that are beyond what is required through regulations, contracts, and other legally binding obligations at the time the Air District executes the project's funding agreement.

2. **TFCA Cost-Effectiveness:** Projects must not exceed the maximum cost-effectiveness (C-E) limit specified in Table 1. Cost-effectiveness ($/weighted ton) is the ratio of TFCA funds awarded to the sum of surplus emissions reduced, during a project's operational period, of reactive organic gases (ROG), nitrogen oxides (NOx), and weighted PM10 (particulate matter 10 microns in diameter and smaller).

   Table 1: Maximum Cost-Effectiveness for TFCA Regional Fund Projects

Policy #	Project Category	Maximum C-E ($/weighted ton)
22	On-Road Truck ~~and Bus~~ Replacements	$90,000
23	Light- and Medium-Duty Zero- and Partial-Zero-Emissions Vehicles for Fleets	$~~250~~500,000
24	On-Road Heavy-Duty Zero- and Partial-Zero-Emissions ~~Vehicles~~Trucks and Buses	$~~250~~500,000
25	Hydrogen Stations	$500,000
26	~~Reserved~~Vehicle Scrapping	~~Reserved~~$50,000
27	Reserved	Reserved
28	Existing Shuttle/Feeder Bus Services	$200,000; $250,000 for services in CARE Areas or PDAs
29	Pilot Trip Reduction ~~– in Community Air Risk Evaluation (CARE) areas or Priority Development Areas (PDAs)~~	$~~250~~500,000
30	Existing Regional Ridesharing Services	$150,000
31	Electronic Bicycle Lockers	$250,000
32	Bikeways	$~~250~~500,000

3. **Consistent with Existing Plans and Programs:** All project categories must comply with the Transportation Control and Mobile Source Control Measures included in the Air District's most recently approved strategy(ies) for achieving and maintaining State and national ozone standards; those plans and programs established pursuant to California Health & Safety Code (HSC) sections 40233, 40717 and 40919; and, when specified, other adopted ~~Federal~~federal, State, regional, and local plans and programs.

4. **Eligible Recipients and Authority to Apply:** Applicants must have the legal authority, as well as the financial and technical capability, to complete projects. In addition, the following conditions apply:
   a. **Eligible Recipients**:
      i. **Public agencies** are eligible to apply for all project categories.

ii. **Non-public entities** are only eligible to apply for Clean Air Vehicle Projects and advanced technology demonstrations that are permitted pursuant to HSC section 44241b(7).

b. **Authority to Apply:** Applicants must demonstrate that they have the authority to submit the application, to enter into a funding agreement, to carry out the project, and to bind the entity to perform these tasks by including either: 1) a signed letter of commitment from the applicant's representative with authority (e.g., Chief Executive or Financial Officer, Executive Director, or City Manager); or 2) a signed resolution from the governing body (e.g., City Council, Board of Supervisors, or Board of Directors).

5. **Viable Project and Matching Funds:** Applicants must demonstrate that they have adequate funds to cover all stages of their proposed project(s) from commencement through completion. Unless otherwise specified in policies #22 through 32, project applicants must demonstrate evidence that they have at least 10% of the total eligible project costs (matching funds) from a non-Air District source available and ready to commit to the proposed projects.

6. **Minimum Grant Amount:** $10,000 per project.

7. **Maximum Grant Amount:** Unless otherwise specified in policies #22 through 32, the maximum grant award amounts are:

   a. Each public agency may be awarded up to $1,500,000 per calendar year; and

   b. Each non-public entity may be awarded up to $500,000 per calendar year.

8. **Readiness:** Unless otherwise specified in policies #22 through 32, projects must commence by the end of calendar year ~~2019~~2020 or within 12 months from the date of execution of the funding agreement with the Air District, whichever is later. For purposes of this policy, "commence" means a tangible preparatory action taken in connection with the project's operation or implementation, for which the project sponsor can provide documentation of the commencement date and action performed. "Commence" includes, but is not limited to, the issuance of a purchase order to secure project vehicles and equipment; commencement of shuttle/feeder bus and ridesharing service; or the delivery of the award letter for a construction contract.

9. **Maximum Two Years Operating Costs for Service-Based Projects:** Unless otherwise specified in policies #22 through 32, TFCA Regional Funds may be used to support up to two years of operating costs for service-based projects (i.e., Trip Reduction Projects).

10. **Project Revisions:** The Air District will consider only requests for modifications to approved projects that are within the same project categories, achieve the same or better cost-effectiveness, comply with all TFCA Regional Fund Policies, and are in compliance with all applicable federal and State laws, and Air District rules and regulations. The Air District may also approve minor modifications, such as to correct typographical mistakes in the grant agreements or to change the name of the grantees, without re-evaluating the proposed modification in light of the regulations, contracts, and other legally-binding obligations that are in effect at the time the minor modification was proposed.

APPLICANT IN GOOD STANDING

11. **In Compliance with Air Quality Regulations:** Applicants must certify that, at the time of the application and at the time of issuance of the grant, they are in compliance with all local, State, and federal air quality regulations. Applicants who are in compliance with those laws, rules and regulations, but who have pending litigation or who have unpaid civil penalties owed to the Air District, may be eligible for funding, following a review and approval by the Air District. The Air District may terminate a grant agreement and seek reimbursement of distributed funds from the project sponsor who was not eligible for funding at the time of the grant.

12. **In Compliance with Agreement Requirements:** Project sponsors who have failed to meet contractual requirements such as project implementation milestones or monitoring and reporting requirements for any project funded by the Air District may not be considered eligible for new funding until such time as all of the unfulfilled obligations are met.

13. **Independent Air District Audit Findings and Determinations:** Project sponsors who have failed either a fiscal audit or a performance audit for a prior Air District funded project will be excluded from future funding for three (3) years from the date of the Air District's final determination in accordance with HSC section 44242. Additionally, project sponsors with open projects will not be reimbursed until all audit recommendations and remedies have been satisfactorily implemented.

    A failed fiscal audit means an uncorrected audit finding that confirms an ineligible expenditure of funds. A failed performance audit means that a project was not implemented as set forth in the project funding agreement.

    Project sponsors must return funds ~~that~~under any of the ~~Air District has determined~~following circumstances:

    a. The funds were expended in a manner contrary to the TFCA Regional Funds' requirements and/or requirements of HSC Code section 44220 et seq.; ~~the~~
    b. The project did not result in a surplus reduction of air pollution from the mobile sources or transportation control measures pursuant to the applicable plan; ~~the~~
    c. The funds were not spent for surplus reduction of air pollution pursuant to a plan or program to be implemented by the TFCA Regional Fund; ~~or otherwise~~
    d. The project sponsor failed to comply with the approved project scope, as set forth in the project funding agreement.

    Applicants who failed to reimburse such funds to the Air District from prior Air District funded projects will be excluded from future TFCA funding.

14. **Executed Funding Agreement:** Only a fully-executed funding agreement (i.e., signed by both the project sponsor and the Air District) constitutes the Air District's award of funds for a project. Approval of an application for the project by the Air District Board of Directors or Air District's notices such as a transmittal letter announcing the proposed award do not constitute a final obligation on the part of the Air District to fund a project.

    Applicants must sign funding agreements within 60 days from the date the agreements were transmitted to them in order to remain eligible for award of TFCA Regional Funds. Applicants may request, in writing, an extension of up to no more than 180 days from the transmittal date to sign the grant agreements. The request shall include the basis for an extended signature period. At its discretion, the Air District may authorize such an extension.

15. **Maintain Appropriate Insurance:** Project sponsors must obtain and maintain general liability insurance and additional insurance that is appropriate for its specific project type throughout the life of the project, with coverage being no less than the amounts specified in the respective funding agreement. Project sponsors shall require their subcontractors to obtain and maintain such insurance of the type and in the amounts required by the grant agreements.

INELIGIBLE PROJECTS

16. **Planning Activities:** The costs of preparing or conducting feasibility studies are not eligible. Other planning activities may be eligible, but only if the activities are both: 1) directly related to the implementation of a specific project or program, and 2) directly contribute to the project's emissions reductions.
17. **Cost of Developing Proposals and Grant Applications:** The costs to prepare grant applications are not eligible.
18. **Duplication:** Projects that have previously received TFCA Regional or County Program Manager funds and do not propose to achieve additional emission reductions are not eligible.

USE OF TFCA FUNDS

19. **Combined Funds:** Unless otherwise specified in policies #22 through 32, TFCA County Program Manager Funds may not be combined with TFCA Regional Funds to fund a TFCA Regional Fund project.

20. **Administrative Costs:** Unless otherwise specified in policies #22 through 32, TFCA Regional Funds may not be used to pay for administrative costs (i.e., the costs associated with administering a TFCA Regional Fund grant). In cases where administrative costs may be paid for by TFCA Regional Funds, they are limited to a maximum of ~~five percent (5%)~~6.25% of total TFCA Regional Funds expended on a project and are only available to projects sponsored by public agencies. To be eligible for reimbursement, administrative costs must be clearly identified in the project budget at the time of application and in the funding agreement between the Air District and the project sponsor.

21. **Expend Funds within Two Years:** Project sponsors must expend the grant funding within two (2) years of the effective date of their grant agreement. Applicants may request a longer period in the application, by submitting evidence that a longer period is justified to complete the project due to its unique circumstance. Project sponsors may request a longer period before the end of the agreements' second year in the event that significant progress has been made in the implementation of the project. If the Air District approves a longer period, the parties shall memorialize the approval and length of the extension formally (i.e., in writing) in the grant agreement or in an amendment to the executed grant agreement.

ELIGIBLE PROJECT CATEGORIES

To be eligible for funding from the TFCA Regional Fund, a proposed project must meet the purposes and requirements for the particular category's type of project.

Clean Air Vehicle Projects

22. **On-Road Truck ~~and Bus~~ Replacements:** The project will replace Class 6, Class 7, and Class 8 diesel-powered trucks~~ and buses~~ that have a gross vehicle weight rating (GVWR) of 19,501 lbs. or greater (per vehicle weight classification definition used by Federal Highway Administration (FHWA)) with new or used trucks ~~and buses~~ that have an engine certified to the 2010 California Air Resources Board (CARB) emissions standards or cleaner. The existing truck(s~~) or bus(es~~) to be replaced must be registered with the California Department of Motor Vehicles (DMV) to an address within the Air District's jurisdiction and must be scrapped after replacement.

23. **Light-and Medium- Duty Zero- and Partial-Zero-Emissions Vehicles for Fleets:** The project will accelerate the deployment of zero- and partial-zero-emissions motorcycles, cars, and light- and medium-duty vehicles:

    a. Each project (fleet deployment) must consist of the purchase or lease of three or more new vehicles registered to a single owner;
    b. ~~Each vehicle~~Vehicles must ~~be 2018 model year or newer, and~~ have a GVWR ~~of~~not exceeding 14,000 lbs~~. or lighter;~~.;
    c. Each car and truck must be maintained and operated within the Air District's jurisdiction for a minimum of three years and 15,000 miles. All other vehicle types must be maintained and operated within the Air District's jurisdiction for a minimum of three years and 9,000 miles;
    d. Eligible vehicle types include plug-in hybrid-electric, plug-in electric, and fuel cell vehicles approved for on-road use by the CARB;
    e. Project Sponsors may request authorization of up to 100% of the TFCA Funds awarded for each vehicle to be used to pay for costs directly related to the purchase and installation of alternative fueling infrastructure and/or equipment used to power the new vehicle;
    f. Projects that seek to scrap and replace a vehicle may qualify for additional TFCA funding toward the purchase or lease of a new vehicle. Costs related to the scrapping and/or dismantling of the existing vehicle are not eligible for reimbursement with TFCA funds;
    g. Vehicles that are solely powered by gasoline, natural gas, or diesel, and retrofit projects are not eligible; and

h. The total amount of TFCA funds awarded ~~may not exceed 90% of the project's cost after~~combined with all other grants and applicable manufacturer and local/~~state~~State/federal rebates and discounts ~~are applied~~may not exceed 90% of the project's eligible cost.

24. **On-Road Heavy-Duty Zero- and Partial-Zero-Emissions ~~Vehicles~~Trucks and Buses**: The project will help fleet operators achieve significant voluntary emission reductions by encouraging the replacement of older, compliant trucks and buses~~vehicles~~ with the cleanest available technology, and help fleet operators who are expanding their fleet to choose the cleanest available technology:

a. ~~Vehicles~~Each vehicle must be new~~, 2018 model year or newer,~~ and have a GVWR ~~of~~ greater than 14,000 lbs.;

b. Vehicles may be purchased or leased;

c. Each vehicle must be maintained and operated within the Air District's jurisdiction for a minimum of three years and 15,000 miles;

d. Eligible vehicles must be approved by the CARB;

e. Project Sponsors may request authorization of up to 100% of the TFCA Funds awarded for each vehicle to be used to pay for costs directly related to the purchase and installation of alternative fueling infrastructure and/or equipment used to power the new vehicle~~;~~ ;

f. Projects that seek to scrap and replace a vehicle may qualify for additional TFCA funding toward the purchase or lease of a new vehicle. Costs related to the scrapping and/or dismantling of the existing vehicle are not eligible for reimbursement with TFCA funds;

g. Vehicles that are solely powered by gasoline, natural gas, or diesel, and retrofit projects are not eligible; and

h. The total amount of TFCA funds awarded ~~may not exceed 90% of the project's cost after~~combined with all other grants and applicable manufacturer and local/~~state~~State/federal rebates and discounts ~~are applied~~may not exceed 90% of the project's eligible cost.

25. **Hydrogen Stations:** ~~These projects are~~The project is intended to accelerate the deployment of hydrogen fueling stations. Funding may be used for the purchase and installation of equipment for new dispensing facilities and for upgrades and improvements that expand access to existing refueling sites. The following additional conditions must also be met:

a. Stations must be located within the Air District's jurisdiction and be available and accessible to the public;

b. Equipment and infrastructure must be designed, installed, and maintained as required by the existing recognized codes and standards and approved by the local/~~state~~State authority; and

c. Each station must be maintained and operated for a minimum of three years.

d. TFCA funding may not be used to pay for fuel or on-going operations and maintenance costs.

e. TFCA funding is limited to 25% of the total eligible project cost and may not exceed a maximum award amount of $250,000 per station.

f. Stations must have received a passing score and/or received approval for funding from a State or federal agency.

26. ~~**Reserved.**~~ **Vehicle Scrapping:** The project is intended to accelerate the removal of highly polluting vehicles, including cars, motorcycles, trucks and buses from Bay Area roads. Funding will be provided to owners of eligble on-road motor vehicles who voluntarily scrap vehicles that meet the following requirements:

a. Vehicles must be roadworthy and pass an inspection by the Air District or its designee.

b. Vehicles must be currently registered with the DMV to an address within the Air District's jurisdiction and have had continuous registration to the same owner for a minimum of two years.

c. Vehicles are not eligible for funding from other Air District programs or other public agencies.

27. **Reserved.**

Trip Reduction Projects

28. **Existing Shuttle/Feeder Bus Services:** The project will reduce single-occupancy vehicle commute-hour trips by providing the short-distance connection between a mass transit hub and one or more definable commercial hubs or employment centers:

    a. The service must provide direct service connections between a mass transit hub (e.g., a rail or Bus Rapid Transit (BRT) station, ferry or bus terminal, or airport) and a distinct commercial or employment location;

    b. The service's schedule must be coordinated to have a timely connection with the corresponding mass transit service;

    c. The service must be available for use by all members of the public;

    d. TFCA Regional Funds may be used to fund only shuttle services to locations that are under-served and lack other comparable service. For the purposes of this policy, "comparable service" means that there exists, either currently or within the last three years, a direct, timed, and publicly accessible service that brings passengers to within one-third (1/3) mile of the proposed commercial or employment location from a mass transit hub. A proposed service will not be deemed "comparable" to an existing service if the passengers' proposed travel time will be at least 15 minutes shorter and at least 33% shorter than the existing service's travel time to the proposed destination;

    e. **Reserved.**

    f. TFCA Regional Funds may be used to fund services only during commuter peak-hours, i.e., 5:00-10:00 AM and/or 3:00-7:00 PM;

    g. Matching funds must be provided to cover at least 10% of the total project cost and must include only direct operational costs. Administrative costs are not eligible for use as matching funds. For shuttle/feeder bus service projects, the total project cost is the sum of direct operational costs (i.e., shuttle driver wages and fuel) of the project;

    h. Project Sponsors must be either: (1) a public transit agency or transit district that directly operates the shuttle/feeder bus service, or (2) a city, county, or any other public agency;

    i. Applicants must submit a letter of concurrence from all transit districts or transit agencies that provides service in the area of the proposed route, certifying that the service does not conflict with existing service; and

    j. Projects that would operate in Highly Impacted Communities or Episodic Areas as defined in the Air District Community Air Risk Evaluation (CARE) Program, or in Priority Development Areas (PDAs), may qualify for funding at a higher cost-effectiveness limit (see Policy #2).

29. **Pilot Trip Reduction:** The project will reduce single-occupancy commute-hour vehicle trips by encouraging mode-shift to other forms of shared transportation. Pilot projects are defined as projects that serve an area where no similar service was available within the past three years, or will result in significantly expanded service to an existing area. Funding is designed to provide the necessary initial capital to a public agency for the start-up of a pilot project so that by the end of the third year of the trip reduction project's operation, the project will be financially self-sustaining or require minimal public funds, such as grants, to maintain its operation:

    ~~a. The proposed project must be located in a Highly Impacted Community or Episodic Area as defined in the Air District Community Air Risk Evaluation (CARE) Program, or in a Priority Development Area (PDA);~~

    ~~b.~~a. Applicants must demonstrate the project will reduce single-occupancy commute-hour vehicle trips and result in a reduction in emissions of criteria pollutants;

    ~~c.~~b. The proposed service must be available for use by all members of the public;

    ~~d.~~c. Applicants must provide a written plan documenting steps that would be taken to ensure that the project will be financially self-sustaining or require minimal public funds to maintain its operation by the end of the third year;

~~c.~~d. If the local transit provider is not a partner, the applicant must demonstrate that they have attempted to have the service provided by the local transit agency. The transit provider must have been given the first right of refusal and determined that the proposed project does not conflict with existing service;

~~f.~~e. Applicants must provide data and/or other evidence demonstrating the public's need for the service, including a demand assessment survey and letters of support from potential users; ~~and~~

Pilot trip reduction projects that propose to provide shuttle/feeder bus and ridesharing service projects must comply with all applicable requirements in policies #28 and #30~~.~~

30. **Existing Regional Ridesharing Services:** The project will provide carpool, vanpool, and other rideshare services. For TFCA Regional Fund eligibility, ridesharing projects must be comprised of riders from at least five counties within Air District's jurisdiction, with no one county accounting for more than 80% of all riders, as verified by documentation submitted with the application.

    If a project includes ride-matching services, *only* ride-matches that are not already included in the Metropolitan Transportation Commission's (MTC) regional ridesharing program are eligible for TFCA Regional Funds. Projects that provide a direct or indirect financial transit or rideshare subsidy are also eligible under this category. Applications for projects that provide a direct or indirect financial transit or rideshare subsidy *exclusively* to employees of the project sponsor are not eligible.

Bicycle Projects

31. **Electronic Bicycle Lockers:** The project will expand the public's access to new electronic bicycle lockers. The project must be included in an adopted countywide bicycle plan, Congestion Management Plan (CMP), or the Metropolitan Transportation Commission's Regional Bicycle Plan, and must serve a major activity center (e.g. transit station, office building, or school). The electronic bicycle lockers must be publicly accessible and available for use by all members of the public.

    TFCA Regional Funds may not be used to pay for costs for maintenance, repairs, upgrades, rehabilitation, operations, and project administration.

    The maximum award amount is based on the number of lockers, at the rate of $2,500 per locker, for example, a quad contains four lockers and would be eligible for a maximum award amount of $10,000.

    Monies expended by the Project Sponsor to maintain, repair, upgrade, rehabilitate, or operate the electronic lockers are not eligible for use as matching funds.

32. **Bikeways:** The project will construct and/or install bikeways that are included in an adopted countywide bicycle plan, Congestion Management Plan (CMP), countywide transportation plan (CTP), city general plan or area-specific plan, or the Metropolitan Transportation Commission's Regional Bicycle Plan. To be eligible for funding, the purpose of bikeways that are included in an adopted city general plan or area-specific plan must be to reduce motor vehicle emissions or traffic congestion. Projects must have completed all applicable State and federal environmental reviews and either have been deemed exempt by the lead agency or have been issued the applicable negative declaration or environmental impact report or statement.

    All bikeway projects must, where applicable, be consistent with design standards published in the California Highway Design Manual~~,~~ or conform to the provisions of the Protected Bikeway Act of 2014.

    Projects must reduce vehicle trips made for utilitarian purposes (e.g., work or school commuting) and cannot be used exclusively for recreational use. Projects must also meet at least one of the following conditions:

    a. Be located within one-half mile biking distance from the closer of a public transit station/stop (e.g., local, county- wide or regional transit stops/stations/terminals) or a bike share station;
    b. Be located within one-half mile biking distance from a major activity center that serves at least 2,500 people per day (e.g., employment centers, schools, business districts);
    c. Be located within one-half mile biking distance from three activity centers (e.g., employment centers, schools, business districts).

    Projects are limited to the following types of bikeways:

a. Class I Bikeway (Bike Path), new or upgrade improvement from Class II or Class III bikeway;
b. New Class II Bikeway (Bike Lane);
c. New Class III Bikeway (Bike Route); or
d. Class IV Bikeway (Separated Bikeway~~). New~~), new or upgrade improvement from Class II or Class III bikeway.

REGIONAL FUND EVALUATION CRITERIA:

1. Projects must meet all of the applicable TFCA Regional Fund policies.
2. Applications will also be evaluated using the evaluation process listed in Table 2:

Table 2: Evaluation Process by Project Category

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24	On-Road Heavy-Duty Zero- and Partial-Zero- Emissions ~~Vehicles~~Trucks and Buses	
25	Hydrogen Stations	Applications will be reviewed after the submittal deadline and eligible projects will be ranked based on their cost-effectiveness score and conformity to Policy #25.
26	~~Reserved~~Vehicle Scrapping	~~Reserved~~Applications will be reviewed on a first-come, first-served basis and eligible projects will be recommended for funding until funding has been depleted.
27	Reserved	Reserved
28	Existing Shuttle/Feeder Bus Services	Applications will may be reviewed on either a first-come, first-served basis or a competitive basis after the submittal deadline. ~~and e~~Eligible projects will be evaluated ~~ranked~~ based on their cost-effectiveness score and conformity to their respective project specific Policy requirements. In the case of a competitive solicitation, projects will also be ranked based on their potential to expand access to 1st and last mile connections to regional or county-wide transit stops/stations/terminals (e.g., BART, Caltrain, Capitol Corridor, ferry terminals) and bike share stations.
29	Pilot Trip Reduction	
30	Existing Regional Ridesharing Services	
31	Electronic Bicycle Lockers	Applications will be reviewed on a first-come, first-served basis~~,~~ and eligible projects will be recommended for funding until funding has been depleted.
32	Bikeways	Applications ~~will~~ may be reviewed on either a first-come, first-served basis or a competitive basis after the submittal deadline. ~~and e~~Eligible projects will be evaluated ~~be ranked~~ based on their cost-effectiveness score and conformity to Policy #32. In the case of a competitive solicitation, projects will also be ranked based on their ~~. Projects that~~ potential to ~~serve~~ expand access to 1st and last mile connections to regional or county-wide transit stops/stations/terminals (e.g., BART, Caltrain, Capitol Corridor, ferry terminals) ~~or~~ and bike share stations ~~will receive a higher priority~~.

3. Up to sixty percent (60%) of TFCA Regional Funds will be prioritized for projects that meet one or more of the following criteria:

   a. Projects in Highly Impacted Communities or Episodic Areas as defined in the Air District Community Air Risk Evaluation (CARE) Program;

   b. Projects in Priority Development Areas (PDAs).

Commenter & Agency	Comment	Staff Response
Ying C. Smith, Town of Los Gatos	1. We highly support the proposed changes to Category 29. Pilot Trip Reduction. We believe by eliminating the geographic area restrictions, the TFCA program can incentivize more innovative projects in this category and make bigger impacts on emission reduction. The change to the maximum cost-effectiveness (C-E) limit in this category will better reflect the costs in bringing these projects forward. Specifically, in the case of the School Bus Pilot Program in Los Gatos, these changes will allow our successful program to leverage local funds with TFCA funds to sustain for a two-year period and achieve our trip reduction goals. We are further encouraged by the staff recommendation to implement these changes as early as in the FY19/20 County program.	1. Noted.
	2. We also recommend that you review the maximum cost-effectiveness (C-E) limit in the 32. Bikeways Category. The limit hasn't changed in many years, while it is evident that construction costs have increased substantially in recent years. The TFCA amounts eligible for many bikeway projects have become a smaller percentage of the total project costs, due to the increase in construction costs. A review and update to the limit will facilitate the completion of many meaningful bikeway projects throughout the Bay Area.	2. Noted. Air District staff is recommending an increase to the C-E threshold for the bikeways project category.
Mike Pickford, San Francisco County Transportation Authority	3. Is the cost-effectiveness (C-E) limit for the new Vehicle Scrapping supposed to be $500,000 instead of $50,000?	3. $50,000 is the correct value. This newly proposed category targets vehicles, e.g., motorcycles, trucks, that are not currently eligible under the Air District's Vehicle Buyback or Clean Cars for All programs. Based on data from the California Air Resources Board EMFAC model, staff estimates that the proposed cost-effectiveness limit will allow sufficient funding to incentivize the early retirement of motorcycles and trucks.

	4. It would be helpful if the Air District added "buses" (explicitly) in policy #24 so it is obvious that zero-emission buses are eligible for TFCA funds.	4. Noted. Air District staff has made proposed text revisions change to address this comment.
	5. The language in policy #13 on returning funds – if the project is found to be not cost-effective, will the sponsor have to refund the full amount of the award or an amount so that the project would become cost-effective? The language may discourage applicants.	5. The purpose of this policy is to ensure that eligible TFCA funded projects are implemented and completed as proposed by project sponsors and approved by the Air District. Air District staff will circle back with the commenter to further discuss this comment and evaluate the opportunities to update this requirement.
	6. Is there a schedule for when solicitations for the various TFCA project categories will open?	6. Air District staff will provide a tentative schedule for TFCA solicitations to the CMAs and post the notice on the Air District's website in early summer to help interested stakeholders to plan for the next cycle of funding.
	7. Battery buses are a big topic, but there hasn't been a lot of interest in the past to apply for grant funding because the eligible TFCA amount TFCA isn't enough to impact replacement efforts.	7. The proposed increase to the C-E limit for the On-Road Heavy-Duty Zero- and Partial-Zero-Emissions Trucks and Buses category is intended to address this comment as the higher limit may allow more funding to be allocated to each project. Also, TFCA may be used to supplement funding from other sources, such as Federal Transit Administration and HVIP.
Bill Hough, Santa Clara Valley Transportation Authority	8. Will these changes in C-E [for Bikeways] be reflected in the County Program Manager (CPM) policies for FYE 2021? Suggest that we make these proposed updates to the CPM FYE 2021 policies, too.	8. Noted. Air District staff is recommending an increase to the C-E threshold for the bikeways project category in both the FYE2020 Regional Fund policies and the previously adopted FYE2020 CPM policies. This same limit is currently being considered for the FYE 2021 CPM policies.
Jacki Taylor, Alameda County Transportation Commission (ACTC)	9. ACTC supports the increase of the C-E limit for bikeway project and ACTC has been advocating for this for a few years.	9. Noted. Air District staff has been proposing periodic updates to the C-E thresholds for all project categories and has worked with stakeholders to evaluate the effect of incremental increases.

Emily Heard, San Francisco Municipal Transportation Agency (SFMTA)	10. Eligible projects: "surplus emissions" clause [Policy #1]. Given the progressive state and city policies on emissions reductions, this restriction greatly reduces eligible projects or parts of projects that can qualify for TFCA funding.	10. Noted. TFCA has historically limited funding to projects that achieve surplus emissions. Staff has been working along with County Program Managers and other stakeholders to ensure that the policies do not penalize applicants who are progressive or ahead of the compliance schedule of rules and regulations. During this next year, Air District staff will be working with the commenter and other stakeholders to evaluate opportunities for addressing this comment.
	11. The strict correlation to CE [Policy #24] for these projects reduces the potential to apply for funds in a geographically constrained service area. When combined with the surplus clause in policy number 1, this particularly impacts San Francisco, which has relatively clean fleets already as well a municipal service area. However, the City's efforts to upgrade its fleets to zero emissions would arguably align with the goals of the program, which are to bring the cleanest technologies to bear on the Bay Area. Additionally, the relatively poor CE of infrastructure that is required to run these clean fleets provides a funding conundrum wherein the agency has to fund one to be able to apply for the other. While infrastructure does not inherently provide vehicle emissions reductions, it is required for the effective implementation of new technologies.	11. Noted. Air District staff is currently proposing an increase to the maximum C-E for On-Road Heavy-Duty Zero- and Partial-Zero-Emissions Trucks and Buses project category to address this comment as the higher limit may allow more funding to be allocated to zero-emission fueling infrastructure projects. Staff is currently working with transit agencies, including SFMTA, who are interesting in deploying zero-emission buses, to develop a program to address this challenge.
	12. The program to policies in 28 and 29 make the program exceptionally difficult to design an eligible project that also meets the needs of the service area. For example, 28a requires specific end points of a route, while recent Pilot Trip reduction cycles have required a dynamic route and/or schedule. Similarly, many under-served service areas would benefit from evening or late night service that serves non-traditional employment destinations and their workers, particularly industrial and retail employment, which are more likely to utilize workers from highly impacted communities and PDAs. This would not be allowable under 28f.	12. Noted. The policies allow TFCA funding to support both project types: those with fixed-routes (existing shuttle services) and those with dynamic routes and schedules (pilot trip reduction projects). TFCA funding has also historically been prioritized to support the reduction of peak commuter-hour traffic since funding is limited and demand is high. During this next year, Air District staff will be working with the commenter and other stakeholders to evaluate opportunities to support non-commuter hour services that effectively reduce emissions.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson David Canepa and Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 13, 2019

Re: Electric Vehicle (EV) Ecosystem Update: EV Equity

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

As part of its deliberations, the Mobile Source Committee (Committee) received several presentations in 2018 on the light- and heavy-duty electric vehicle (EV) ecosystem in the Bay Area. In order to expand upon and disseminate the information in those presentations, the Committee requested that staff prepare a comprehensive written report on the status of EVs in the Bay Area.

DISCUSSION

The Bay Area Air Quality Management District (Air District) has invested significant resources to reduce transportation emissions through the deployment of electric vehicles (EVs). In this memo, electric vehicles are defined as battery electric vehicles (BEVs), hydrogen fuel cell vehicles (FCEVs), and plug-in hybrid electric vehicles (PHEVs). Attachment 1 is a comprehensive report on light-duty EV adoption trends, infrastructure, barriers, and Air District programs to increase EV awareness, equity, and adoption. Across multiple Mobile Source Committee meetings in 2019, staff are providing an overview of the topics covered in this report, including:

- Status of Light-Duty EV Adoption in the Bay Area (March 28, 2019)
- EV Programs: Incentives and Awareness (April 25, 2019)
- **EV Programs: EV Equity** (current meeting)

This update on EV Equity will include an update on the EV adoption trends, incentives and awareness programs, heavy-duty EV market, and the Clean Cars for All Program which was launched by the Air District in 2019.

This report (Attachment 1) will be the basis for additional stakeholder review and input in order to develop an update to 2013 Bay Area EV Readiness Plan: the "Bay Area EV Acceleration Plan." At a future Committee meeting, staff will also provide a similar update on the market for heavy duty EVs and zero-emissions vehicles.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Funding for these contracts comes from a grant from the Federal Highway Administration and California Department of Transportation, through the Congestion Mitigation and Air Quality Improvement (CMAQ) Program.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Tin Le
Reviewed by: Ranyee Chiang

Attachment 6A: Bay Area Electric Vehicle Ecosystem: 2019 Update for the BAAQMD Board of Directors

Attachment 1: Bay Area Electric Vehicle Ecosystem: 2019 Update for the BAAQMD Board of Directors

Table of contents

DEFINITIONS

Vehicle Types:

BEV – battery electric vehicle

EV – electric vehicle, including BEV, PHEV, and FCEV

FCEV – hydrogen fuel cell electric vehicle

ICE – internal combustion engine

PHEV – plug-in hybrid electric vehicle

ZEV – zero-emissions vehicle

Organizations:

CARB – California Air Resources Board

CEC – California Energy Commission

PG&E – Pacific Gas and Electric

Relevant Terms:

GHG – greenhouse gases

MSRP – manufacturer's suggested retail price

TCO – a vehicle's total cost of ownership, including purchase cost, repairs, fuel, maintenance, taxes, insurance, finance, incentives, and depreciation

TFCA – Transportation Fund for Clean Air

BACKGROUND

The nine-county Bay Area is home to approximately 7.6 million people[1] and 5.3 million light duty vehicles[2], with an additional 600,000 vehicles passing daily through the region from adjacent areas.[3] Three-quarters of Bay Area residents drive to work (64% drive alone and 10% carpool) and 12% take transit to work.[4] Tailpipe emissions from these light duty vehicles account for approximately 28% of greenhouse gas (GHG) emissions (CO2e) and a significant portion of other pollutants (31% of carbon monoxide and 12% of nitrogen oxide) in the Bay Area.

In addition to alternative transit modes that include walking, biking, mass transit, and shared transportation, wide-scale adoption of electric vehicles (EVs) and electrification of all types of transportation are essential to achieving local, State, and Federal emission reduction targets for greenhouse gases and criteria pollutants. California has set a goal of 5 million EVs sold by 2030, and the Bay Area has set a target of 90% of vehicles in the Bay Area being zero emissions by 2050. The Bay Area and California also share the goal to cut greenhouse gas emissions to 80% below 1990 levels by 2050. Rapid growth in the EV market, especially for BEVs, will be a significant part of achieving these goals.

With the first introduction of commercially available light-duty EVs in 2010, the Air District began programs to monitor the EV market and increase EV adoption in the Bay Area. The Air District's efforts have included development and implementation of region-wide EV plans, outreach and awareness activities, and direct financial incentives. This report includes an update of the EV ecosystem, ongoing Air District programs, and future areas of focus to further accelerate EV adoption.

CURRENT BAY AREA EV ECOSYSTEM

Environmental Benefits

Compared to internal combustion engine (ICE) vehicles, battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs) emit fewer greenhouse gas emissions (Figure 1). All BEVs and fuel-cell vehicles produce zero direct GHG emissions, while PHEVs produce direct emissions when operating on gasoline. The lifecycle emissions of a BEV depend on the energy mix of the region's grid. For example, the U.S. average emissions from charging a Chevy Bolt is 1.7 times higher than charging in the Bay Area, due to California's high fraction of renewable energy versus coal and natural gas. In recent years, GHG emissions associated with BEVs and PHEVs have decreased because of increased renewable energy generation on the grid (which reduces lifecycle emissions), as well as improvements in vehicle technology (which reduces direct emissions).

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[1] *United States Census Bureau,* American Community Survey, Demographic and Housing Estimates, 2017

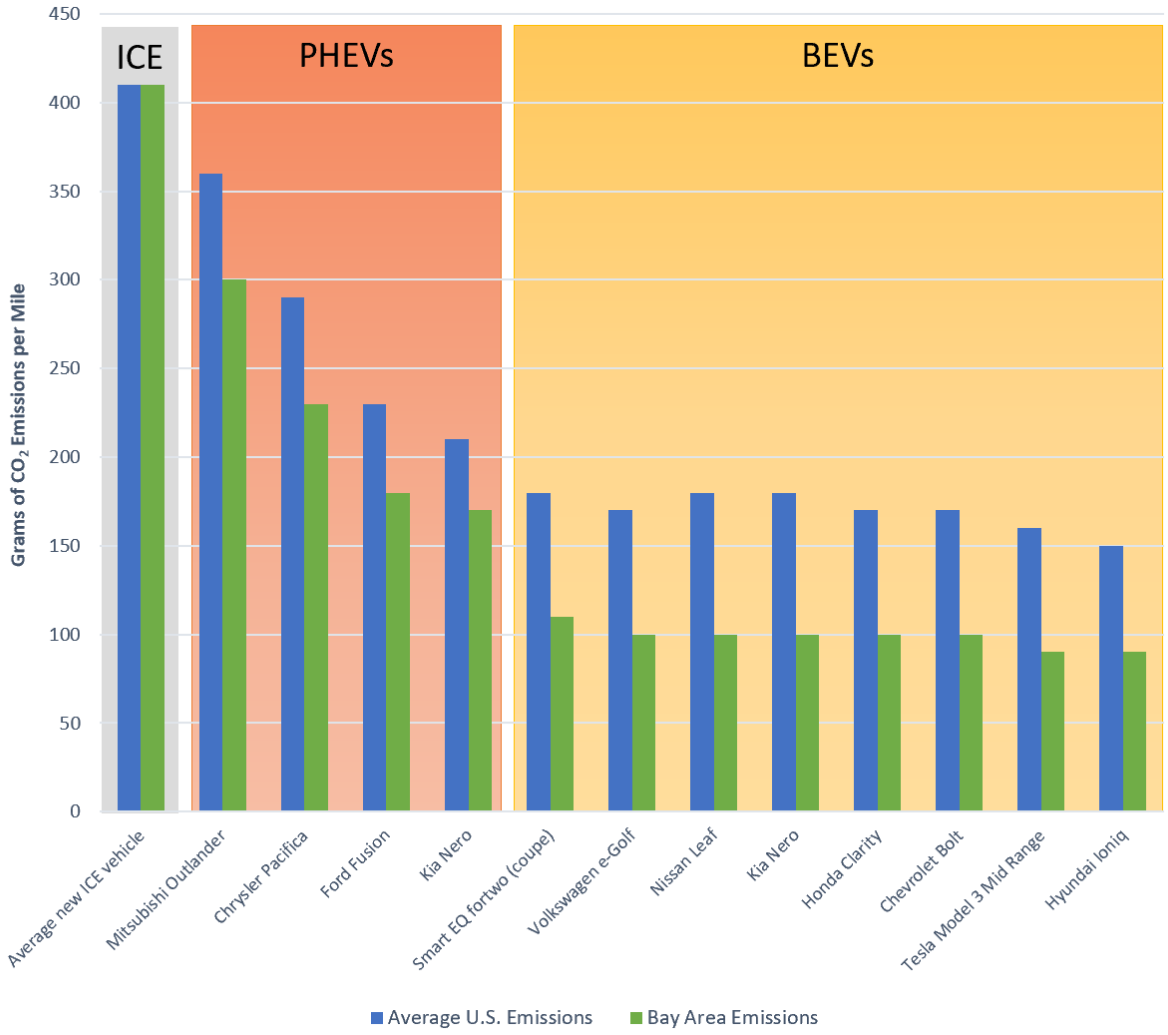
[2] *California Department of Transportation*: Estimated Vehicles Registered by County, 2017

[3] *California Department of Transportation*: Annual Traffic Volume Reports (1992-2015)

[4] *United States Census Bureau,* American Community Survey, 2016

Further emissions benefits will be realized over time as more of the region's power grid shifts to renewable energy sources[5] and as battery technologies improve.

Figure 1: Example Vehicle Emissions for EVs in the Bay Area compared to the U.S. Average



Source: FuelEconomy.gov, 2019 emissions and models. Bay Area charging emissions data is from Oakland, CA, which is used as a representative city in the Bay Area. The calculator can be used for other Bay Area cities as well.

Available Vehicles

Until a few years ago, the availability of EV models was a major hurdle for interested consumers. However, following the implementation of the California's Zero Emission Vehicle (ZEV) Program, the market grew significantly. The ZEV program required auto manufacturers to offer a specific number of EVs in the state and thereby provided drivers more options compared to other

[5] *Environmental Assessment of a Full Electric Transportation Portfolio*, Electric Power Research Institute/National Resources Defense Council, September 2015.

states. This requirement, combined with incentives, rebates, and carpool lane access, has made California a leader in the EV automotive market. In 2015, California drivers could choose from 20 different EV models[6]; that number has climbed to 43 EV models in 2019, which includes 20 BEVs and 3 FCEV.

The manufacturer's suggested retail price (MSRP) and battery range of BEVs available in California vary widely (Table 1). While the average MSRP of BEVs has decreased over the past few years, EVs are still priced higher than conventional vehicles, on average. The average BEV MSRP in the U.S. is $58,000, which is still above the average transaction price for all new light duty vehicles, which is $37,149.[7] The price differential between conventional vehicles and EVs is seen as a key barrier to EV adoption, particularly for low- and moderate-income households.

Table 1: Availability, Cost, and Range of BEVs sold in the U.S.

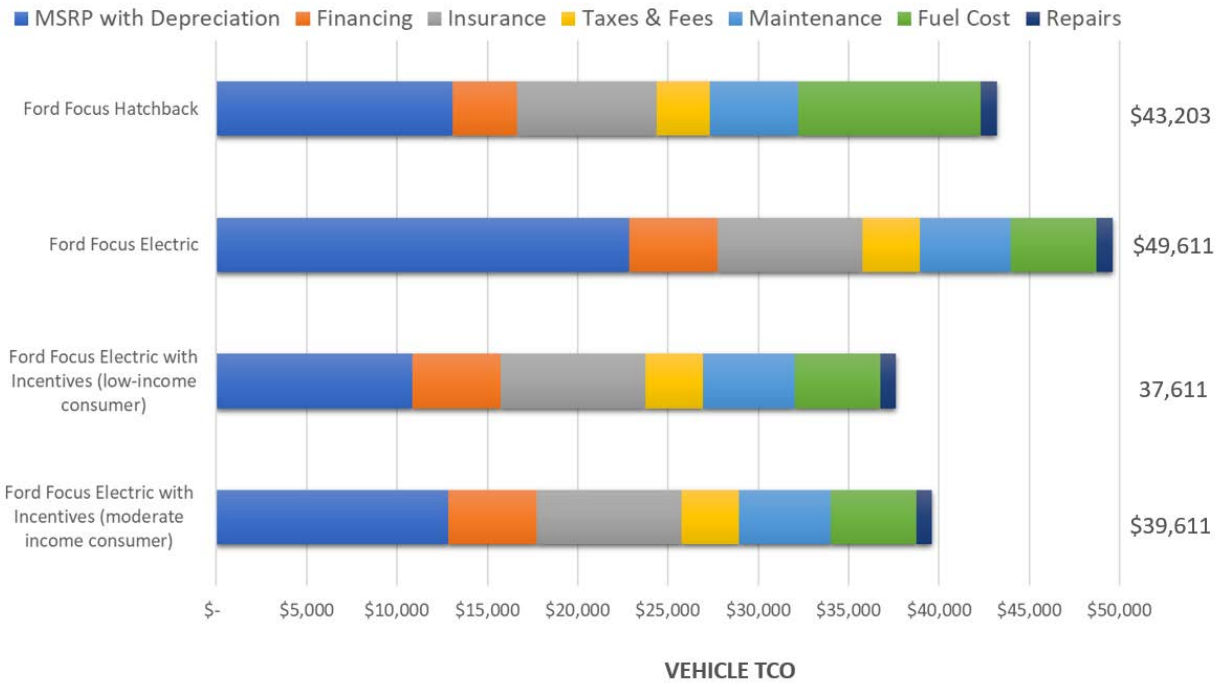
Type of Vehicle	BEVs Available in CA	MSRP	Range
City 2-door	3	$24,000-$45,000	84-114 miles
Compact	6	$29,000-$38,000	89-238 miles
Sedan	7	$34,000-$135,000	111-335 miles
SUV	4	$37,000-$140,000	64-100 miles
Pick-up Truck	*Expected in 2020*		
Minivan	*Expected in 2020*		

While BEVs have higher MSRPs than conventional vehicles, the difference in purchase price is typically offset by savings on fuel and maintenance, as well as financial incentives. A useful metric to compare the costs of BEVs to conventional vehicles is total cost of ownership (TCO). TCO includes costs incurred by vehicle owners throughout a car's lifecycle, such as repairs, fuel, maintenance, taxes, insurance, finance, and depreciation (Figure 2). BEV's total cost of ownership is lower compared to other vehicle categories (including PHEV) because of less wear on the brakes, fewer moving parts, and availability of incentives.[8] Uncertainty in how battery range and performance degrades over time is a factor in TCO. However, because of high demand for used EVs in California, the depreciation rate of BEVs has been less than EVs sold in other markets.

[6] *Electrifying the Vehicle Market (2016)*, Union of Concerned Scientists, August 2016.
[7] *Average New-Car Prices Up More Than 4 Percent Year-Over-Year for January 2019*, Kelly Blue Book, February 2019.

[8] *Total cost of ownership and market share for hybrid and electric vehicles in the UK, US and Japan*, Applied Energy, January 2018.

Figure 2: Example 5-year Total Cost of Ownership, 2019 ICE vehicle (Ford Focus) and BEV (Ford Focus EV)



Source: Edmunds True Cost to Own calculator

The example presented above shows how federal tax credits ($7,500) and California rebates ($4,500 for low-income, $2,500 for moderate income) together make the electric version of the Ford Focus cost competitive compared to the ICE version of the Ford Focus. The federal tax credit is phased out after each manufacturer sells 200,000 vehicles of their electric models. Tesla and General Motors have hit the phase out limit. Other car manufacturers are expected to reach the phase out limit within the next seven years, if current sales trends continue.[9] Around this time frame, Bloomberg New Energy Finance (BNEF) is projecting that EVs will become cost-competitive on an unsubsidized basis.[10] Starting in 2024 and by 2029, most EV models will reach parity with ICE vehicles as battery prices continue to fall (due to economies of scale associated with the increase in mass manufacturing of lithium-ion batteries).

The following automakers have pledged to support the large-scale transition from internal combustion engine vehicles to electric vehicles (Table 2).[11] The commitments include electrifying their entire lineups, increasing the number of EV models available, emissions reduction targets, and phasing out internal combustion engine vehicles.

[9] *Federal EV Tax Credit Phase Out Tracker by Automaker*, EVAdoption.com, November 2018.

[10] *Electric Vehicle Outlook 2018*, Bloomberg New Energy Finance, 2017.

[11] *What does automakers commitments to EVs entail*, Clean Technica, October 2018.

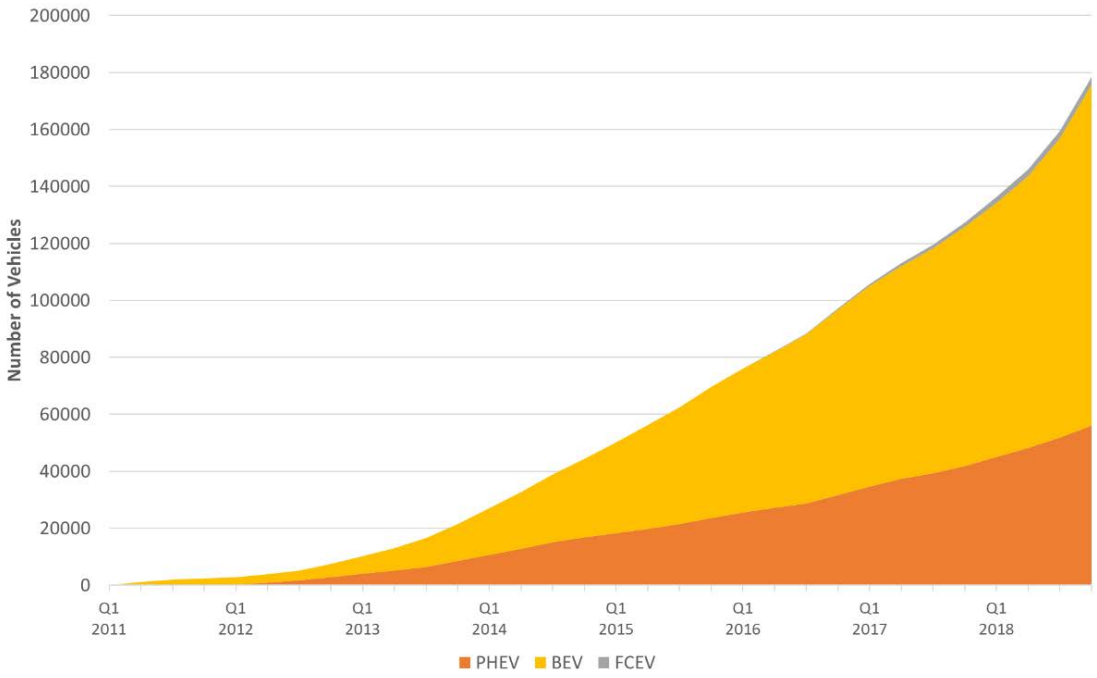
Table 2: Auto Manufacturer EV Commitments

Automaker	Year	Commitment
Volvo	2019	Sell an electrified version of each of its models
Jaguar Land Rover	2020	Sell an electrified version of each of its models
Daimler (Mercedes-Benz)	2022	Sell an electrified version of each of its models and add 10+ BEVs to market
Fiat Chrysler Automobiles	2022	Sell 12 battery-electric, plug-in, and hybrid versions across 30 different lines of vehicles
Ford Motor Company	2022	Sell 40 hybrid and fully electric vehicles
Nissan Motor Company	2022	Sell 12 new zero-emission vehicles through their partnership with Mitsubishi and Renault
General Motors	2023	Sell 20+ battery electric models and committed to an "all-electric future"
Toyota Motor Company	2025	Sell an electrified version of each of its models
Honda Motor Company	2030	Sell an electrified version of 2/3 of its models
Volkswagen Group	2030	Sell an electrified version of each of its models
Toyota Motor Company	2050	Eliminate almost all CO_2 emissions from new Toyota vehicles

Adoption and Sales

Using a conservative estimate from data from the CVRP program, at the end of 2018, the Bay Area had more than 180,000 EVs, representing 3% of the region's fleet.[12] The Bay Area has generally had about 50% of EVs in California and one quarter of the EVs in the US. The Bay Area market saw a massive increase in EV sales, growing 68% from 2017 to 2018. (Figure 3).

Figure 3: EVs (PHEV, BEV, and FCEV) in the Bay Area

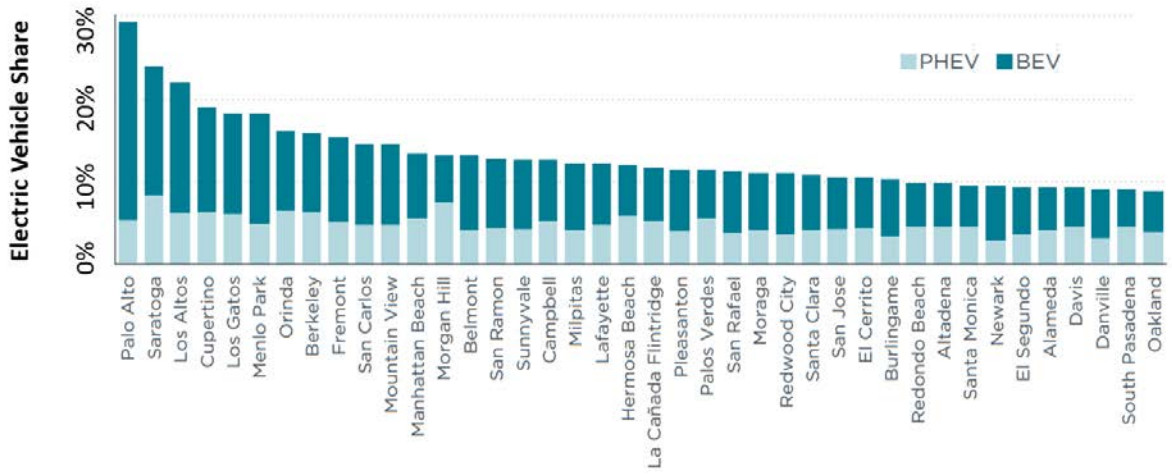


Source: Clean Vehicle Rebate Program (January 2019)

[12] *Program Statistics*, Clean Vehicle Rebate Program, January 2019

The San Francisco and San Jose metropolitan areas, ranked among the top four markets nationally in terms of electric vehicle sales share in 2017, and accounted for 13% and 7% of sales in the national EV light-duty market, respectively.[13] During 2017, 30 of the top 40 California cities for EV sales were in the Bay Area, ranging from 9% to 29% of market share (Figure 4). Cities that have percentages of electric vehicles sold also tended to have a much higher proportion of BEVs.[13]

Figure 4: Top California Cities for New EV Market Share in 2017

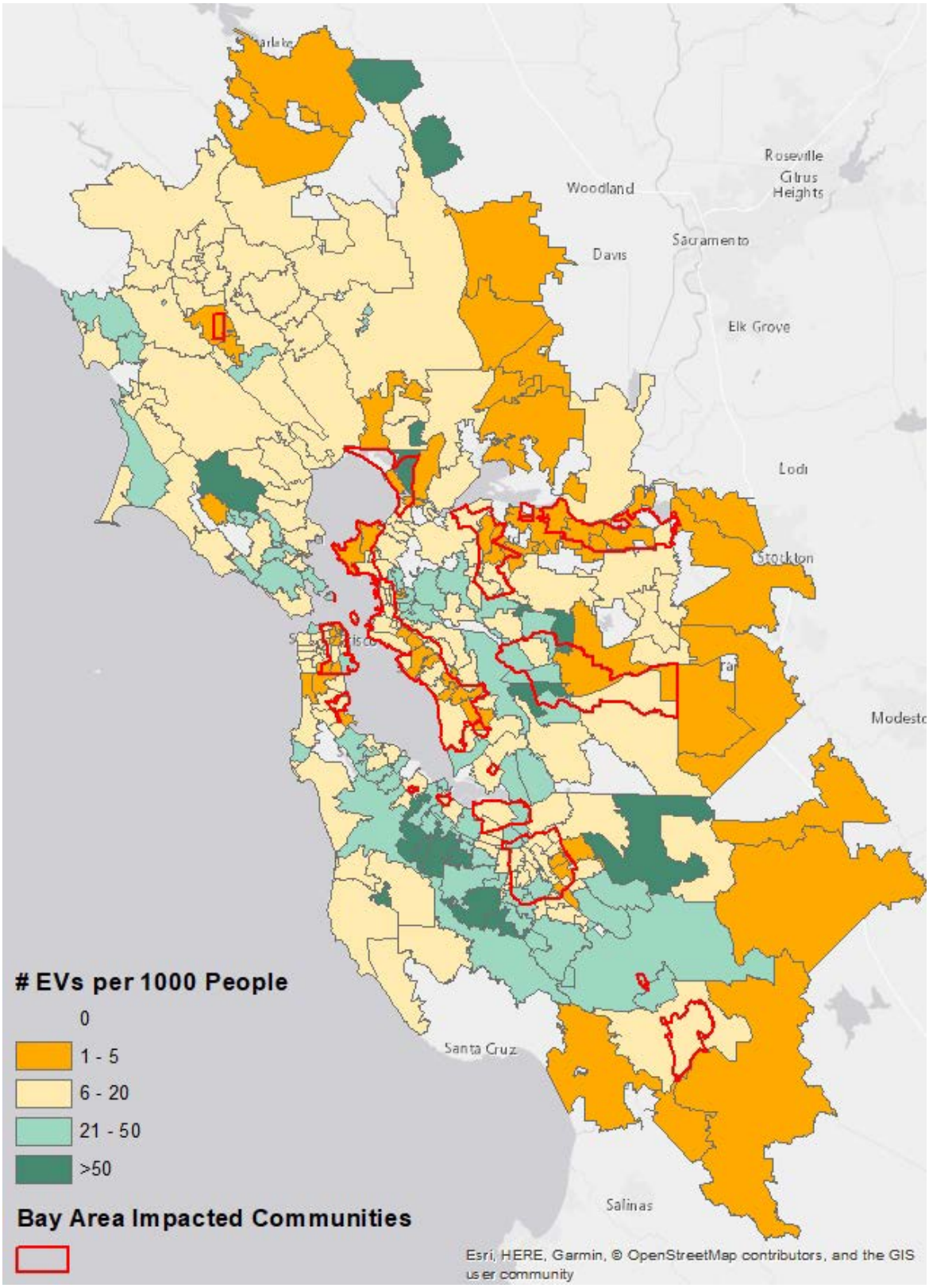


Source: ICCT, Vehicle registrations from IHS Automotive

Other areas in the Bay Area have significantly lower rates of EV adoption (Figure 5). Expanding EVs beyond early adopters and to all geographies and demographics is critical to achieve the Bay Area and California's goals for reductions in greenhouse gas emission. EVs also offer savings on fuel and maintenance as well as an improved driving experience, which can benefit all Bay Area residents.

[13] *California's continued electric vehicle market development,* The International Council on Clean Transportation, May 2018.

Figure 5: Bay Area EV Adoption Map, with Impacted Community Boundaries Highlighted



Source: DMV Registration Data (2017), Air District Community Air Risk Evaluation, CalEnviroScreen 3.0

Charging Infrastructure

The availability of charging infrastructure is a critical factor influencing the number of people who switch to EVs. Publicly accessible EV chargers are needed to support the growing number of EV drivers, especially for long-distance trips and for drivers that do not have access to private home chargers. Determining the correct charger types for charging locations is also an important decision to maximize efficiency, cost-effectiveness and provide the convenience that EV drivers want and need. In many instances, a mix of charger types will be appropriate.

Charging stations are categorized by the power output into Level 1, Level 2, DC Fast, and DC Ultra-Fast (Table 3). Level 1 and Level 2 chargers are appropriate for locations where users dwell for longer periods of time, such as at workplaces, and destinations such as parks and transit park-and-ride lots. DC fast chargers can quickly charge EVs within an hour and are best suited for drivers that are making longer trips, or for situations in which a quick charge is required to resume work such as for taxis, transportation network companies, or fleets. Recently, higher powered DC Ultra-Fast chargers have been deployed, although to date, only a few vehicles can accept these higher power outputs. It is anticipated as EV battery technology advances improving EV ranges, higher powered chargers will be helpful to support future EV technology.

Table 3: Types of EV Chargers

	Level 1	Level 2	DC Fast	DC Ultra-Fast
Electric Output (kW)	*1.4*	*6.2+*	*50+*	*80+*
Ideal charging locations	*Home, Long-term Parking Lots, Overnight*	*Workplace and Destination such as parks*	*Quicker charging at grocery stores & near highways*	*Extremely quick charging at grocery stores & near highways*
Approximate time to fully charge*	*8+ hours*	*3-8 hours*	*20 minutes-1 hour*	*20 minutes-1 hour*

* Charging times vary based on the size of batteries. As newer EVs increase battery sizes to support longer ranges, charging times may increase.

In addition to power outputs, charging stations can also appear with multiple ports so one charger may connect to multiple vehicles for charging. Depending on site design and anticipated utilization, single versus dual-port chargers are a consideration.

There are currently 1,600+ charging locations with 7,500+ publicly available ports in the Bay Area (Figure 6). Of those publicly available ports, the vast majority are L2 charging ports (87%). A smaller portion (11%) are DC Fast charging ports (Figure 7).

Figure 6: Publicly Accessible EV Charging Stations in the Bay Area

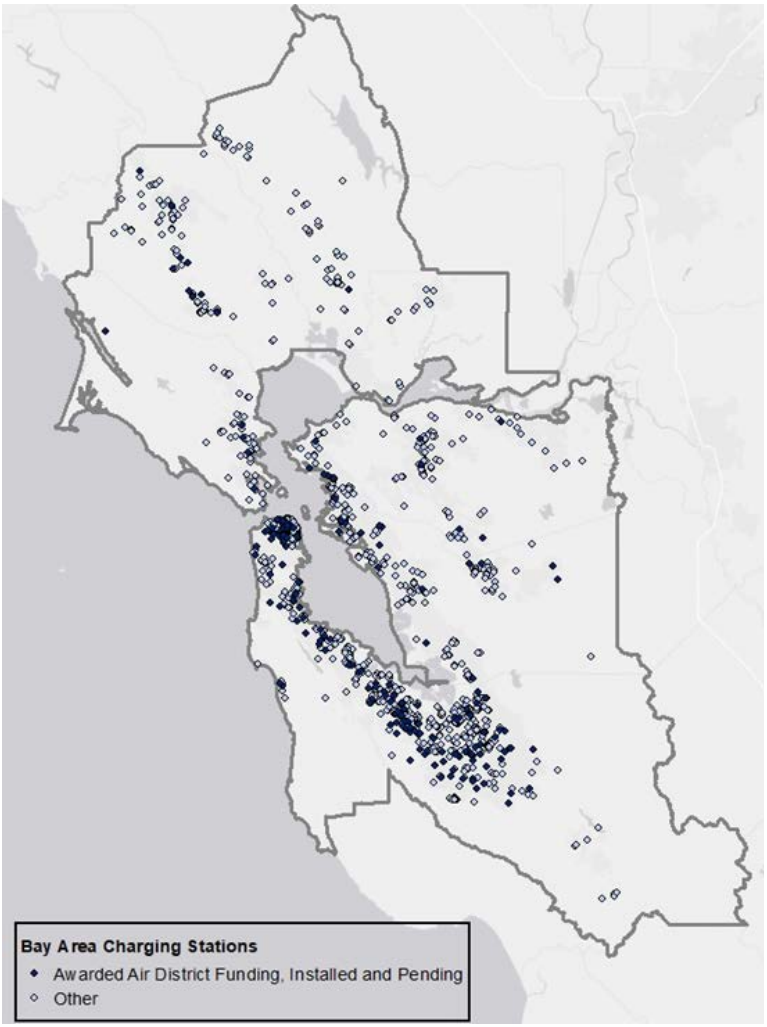
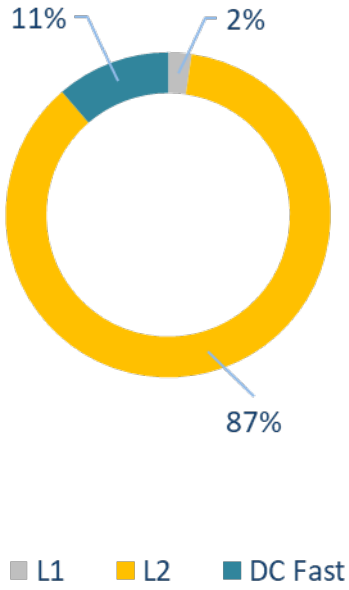


Figure 7: Publicly Accessible EV Charging Ports by Type

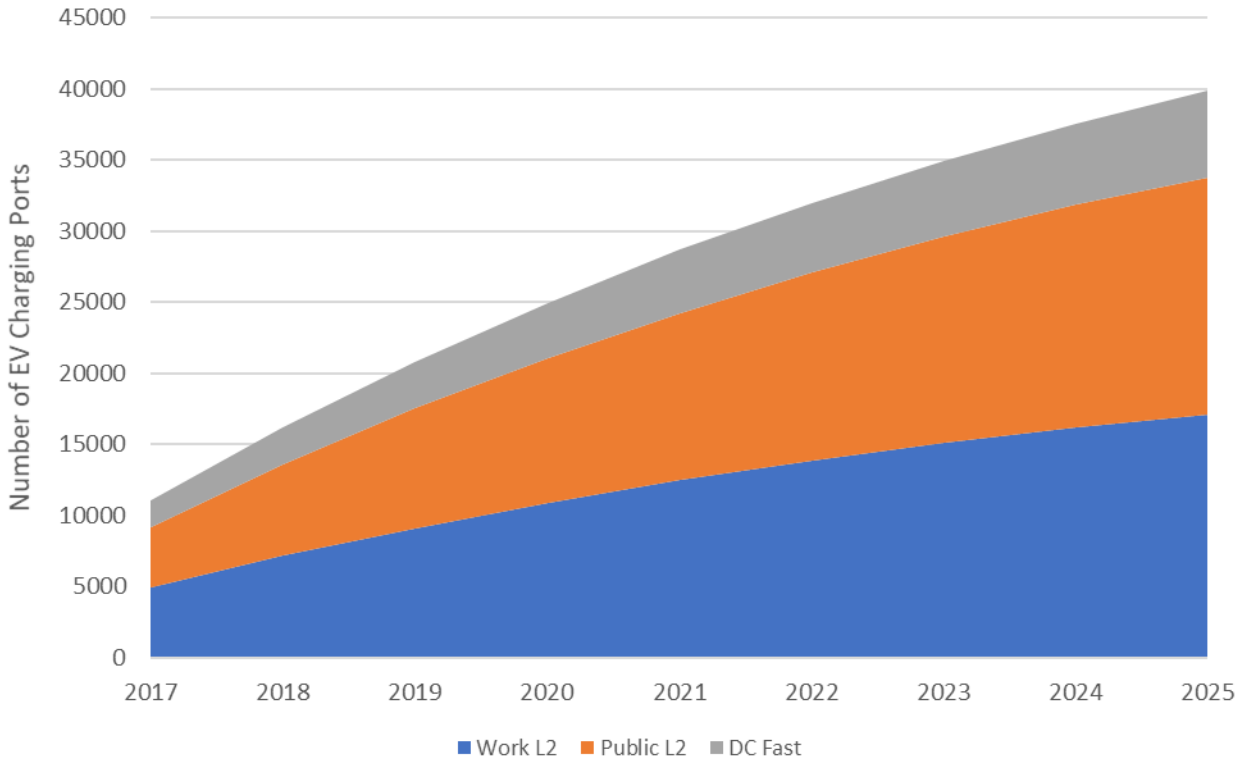


Source: Alternative Fuels Data Center and Charge! Program (BAAQMD)

Additional charging stations will be needed to accommodate future growth in the EV market, especially to achieve the ambitious Bay Area goals and to accommodate a wider range of Bay Area residents. There have also been anecdotal reports that current charging stations are often full, which indicates that additional charging station capacity is needed even for the current number of EV drivers. The National Renewable Energy Laboratory (NREL) and California Energy Commission (CEC) developed a computer simulation tool, Electric Vehicle Infrastructure Projection (EVI-Pro), which uses the results of a state-wide transportation habits survey to quantify the charging infrastructure needed to ensure that future EV drivers can meet their transportation needs. This analysis accounts for projections for vehicle and charger technologies, user demographics and market adoption conditions, the shared-use of chargers, and travel and charging

preferences. [14] Over 20,000 public charging ports are estimated to be needed in 2019 (9,100 workplace L2, 8,400 public L2, and 3,300 DC Fast) (Figure 8). To stay on track with our goals, by 2025, the Bay Area is estimated to need about 40,000 public charging ports (17,000 workplace L2, 17,000 public L2, and 6,000 DC Fast).

Figure 8: Projected Need for PHEV and BEV Charging Infrastructure in the Bay Area



Source: National Renewable Energy Laboratory, CEC EV Infrastructure Projection Tool (EVI-Pro)

Widespread charging infrastructure will be key to overcoming current and future barriers to electric vehicle adoption. An individual or household's need for public charging infrastructure is related to home type, with drivers in single-family homes being much more likely to have home charging than those in apartments or multi-unit dwellings. Electric vehicle owners so far tend to live in single-family homes.[15] To extend the EV market beyond those living in single-family homes, we will have to expand charging available at multi-unit dwellings and public charging infrastructure. In the Bay Area, over one-third (36%) of housing units are in multi-unit

[14] *California Plug-In Electric Vehicle Infrastructure Projections: 2017-2025*, California Energy Commission, March 2018

[15] *Quantifying the electric vehicle charging infrastructure gap across U.S. markets*, the International Council on Clean Transportation, January 2019.

dwellings.[16] Installing charging infrastructure has been more challenging for multi-family housing, requiring away-from-home charging options for a significant portion of the Bay Area population. The need for drivers to take longer-distance trips and with a wide range of transportation patterns also requires public charging.

Consumer Sentiments

Based on recent studies and surveys, as well as anecdotes from our partners, Air District staff is highlighting three concerns that significantly influence consumer sentiment (or lack of knowledge) related to EVs: cost, range anxiety, and awareness of vehicles and infrastructure.

As mentioned above, the upfront cost (MSRP) for most EVs is higher than similar conventional vehicles, and only slightly competitive when incentives and total cost of ownership are considered. The higher upfront cost of EVs turns off many cost-sensitive consumers who may have originally considered an EV. While luxury bands like Tesla have increase the visibility and "cool factor" of EVs, they have also contributed to a perception that EVs are for the wealthy, and therefore must be expensive. Many consumers don't initially see EVs as a smart economic decision.

For consumers who are not EV drivers, range anxiety is one of the most common concerns, particularly for consumers without charging options at or near their home. Consumers often overestimate the range they need in a vehicle and are therefore cautious when considering fully electric models. While the average Californian travels less than 30 miles a day, survey data shows that consumers think they need upwards of 300 miles of range.[17] Increases in battery range and the number of charging stations will help address range anxiety, but to truly shift consumer sentiment, more EV education, understanding actual transportation needs, and charging station signage are needed.

The previous concerns are seen among individuals who have at least some awareness of EVs. A recent study of Californian consumers found that despite a near doubling in the number of EV models in California between 2014 and 2017, *fewer* survey respondents were able to name an EV for sale in 2017 than in 2014.[18] Consumers who were aware of EVs thought of them as small compact cars, that might not fit their lifestyle the way a crossover, SUV, or minivan would. Additionally, consumers' awareness of public charging stations barely shifted from 2014 to 2017, even though public EV chargers in California jumped from 5,700 in 2014 to more than 11,500 by 2017. The study concluded that Californians are not actively avoiding EVs, they are simply unaware of EVs, which speaks to the importance of increased EV marketing and outreach.

<u>POLICIES, PROGRAMS, AND INCENTIVES</u>

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[16] *American Fact Finder,* United States Census Bureau, January 2019.

[17] *The Barriers to Acceptance of Plug-in Electric Vehicles: 2017 Update,* National Renewable Energy Laboratory, 2017.

[18] *Automakers and Policymakers May Be on a Path to Electric Vehicles; Consumers Aren't,* UC Davis, 2017.

Federal, state, regional, and local governments have taken important steps to address key barriers to EV adoption and infrastructure. Government actions to accelerate EV adoption include goals for EV adoption, financial and nonfinancial incentives, supporting public charging infrastructure, marketing materials and campaigns, public ride-and-drive events, and building codes and other policies. These policies and programs seek to overcome perceived and actual consumer barriers related to higher upfront costs, electric range, and awareness and understanding. Data collected by the International Council on Clean Transportation showed that these local and state governments and utilities programs have been generally successful.[19]

The following tables list the key state, regional, and local targets, plans, standards, campaigns and incentives relevant to the Air District's jurisdiction (Tables 4 - 8). There are many EV efforts in place or under development within the Bay Area that help the EV market grow, but this proliferation of programs has also increased the need for coordination among EV-focused agencies and organizations.

Table 4: Bay Area and California Targets Relevant to EVs

Bay Area	Reduce GHG emissions 80% below 1990 levels by 2050 (Air District 2017 Clean Air Plan)
	90% of Bay Area vehicles are zero-emissions by 2050 (Air District 2017 Clean Air Plan)
California	Reduce GHG emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050 (AB32/SB32)
	Zero Emission Vehicle Program, requires auto manufacturers to sell electric cars, tied to the auto manufacturer's overall sales within the state
	Low Carbon Fuel Standard, requires the carbon content of fuels to decrease 10% from 2010 levels by 2020
	5 million ZEV's on road by 2030 (Executive Order B-48-18)
	Install 250,000 EV chargers and 200 hydrogen refueling stations by 2025 (Executive Order B-48-18)

Table 5: Bay Area and California Plans Relevant to the EV Market

Bay Area	Bay Area Plug-in EV Readiness Plan (2013)
	Plan Bay Area 2040
California	2016 ZEV Action Plan
	2018 ZEV Action Plan – Priorities Update
	SB 375/Sustainable Communities Strategies

[19] *Expanding the Electric Vehicle Market in U.S. Cities*, the International Council on Clean Transportation, 2017.

Table 6: Building Code Requirements for EV Infrastructure (California Green Building Standards (CALGreen) and Bay Area Jurisdictions with Additional Requirements)

	Multi-Family	Single Family	Non-Residential
CALGreen Code Requirements for EV Capable Parking	10% of parking spaces	100% of attached private garages	6% of parking spaces
City			
Berkeley	✓		
Burlingame	✓	✓	
Contra Costa County	✓		✓
Cupertino	✓	✓	✓
Emeryville	✓		
Fremont	✓	✓	✓
Marin County	✓	✓	✓
Menlo Park	✓		✓
Mountain View	✓		✓
Oakland	✓		✓
Palo Alto	✓	✓	✓
San Mateo	✓		✓
San Francisco	✓		✓
San Rafael	✓	✓	✓
Santa Clara County	✓	✓	✓
Santa Rosa	✓		
Sunnyvale	✓	✓	

Source: ChargePoint (2018), "EV Capable" requires raceway and panel capacity.

Table 7: S Currently Available EV Rebates and Incentives Available in the Bay Area

Electric Vehicle	California Clean Vehicle Rebate (CSE and CARB)
	Clean Cars for All (Air District and CARB)
	Clean Vehicle Assistance Program (Beneficial State Foundation and CARB)
	DriveEV (Sonoma Clean Power)
	Federal tax credit
	MCEv Program (Marin Clean Energy)
Charging Infrastructure	CALeVIP (CSE and CEC)
	Charge! (Air District)
	Clean Fuel Rebate (PG&E)
	EV Charge Network (PG&E)
Other	California Air Vehicle Decals – HOV Lane Usage (DMV
	Charge Now (BMW))
	No Charge to Charge (Nissan)

Table 8: EV Awareness Campaigns and Initiatives

Bay Area	Center for Sustainable Energy (Experience Electric – The Better Ride)
California	Charge Across Town
	Plug in America
	Veloz (Electric for All, Best.Drive.Ever)
National	Electrify America
	Plug in America

AIR DISTRICT PROGRAMS

Since EVs first came onto the market, the Air District has been focused on monitoring the market, developing plans, conducting outreach, and offering incentives to build up the charging infrastructure and support early EV adopters. The initial Air District programs were designed to complement other ongoing EV efforts, develop understanding and prepare for a new market, address the lack of public EV charging infrastructure, offset the higher initial costs, and support Bay Area residents, local governments, and businesses to test out new technologies.

Table 9: Air District EV Programs

2013 Bay Area EV Readiness Plan	www.baaqmd.gov/plans-and-climate/bay-area-pev-program/bay-area-pev-ready
Bay Area EV Council	www.baaqmd.gov/plans-and-climate/bay-area-pev-program
Charge!	www.baaqmd.gov/charge
Clean Fleets	www.baaqmd.gov/cleanfleets
Clean Cars for All (new)	www.baaqmd.gov/cleancarsforall

Planning

In 2013, the Air District partnered with the Metropolitan Transportation Commission (MTC) and other electric vehicle stakeholders to develop and publish the Bay Area Plug-In Electric Vehicle Readiness Plan. Based on research, analysis, and public input, the 2013 plan included:

- Projections for EV ownership and deployment; barriers to EV ownership, deployment, and recommendations to eliminate barriers in private and public fleets, including recommendations for future incentive programs;
- Key strategic zones/areas for deployment and types of charging stations for regional EV charging infrastructure;
- Best practice recommendations for local government regarding their EV readiness and friendliness with respect to regional coordination, permitting and inspection practices, zoning and parking rules, local ordinances, and building codes;
- Integration of the Regional PEV Plan into the Bay Area's Sustainable Communities Strategy (SCS) plan (Plan Bay Area 2040).

Based on this plan, the Air District developed incentives and coordination activities to help get the Bay Area ready for the introduction of new EV technologies and demonstrate the viability of EVs.

Incentives

Since 2010, the Air District's Board of Directors has awarded over $19 million through incentive programs to target the identified barriers to EV adoption. Many of these incentives have leveraged additional investments from other organizations such as PG&E's Charge Network, Marin Clean Energy's MCEv Charging Program, California's Clean Vehicle Rebate Program, and the federal EV tax credit. Air District staff continue to identify other opportunities to leverage other incentive programs to reduce the costs for Bay Area residents, businesses, and local government. To date, the Air District has awarded projects that support the installation of more than: 1,500 passenger electric vehicles, 4,400 publicly available Level 2 and DC Fast chargers (Figure 7), and over 1,400 residential chargers.

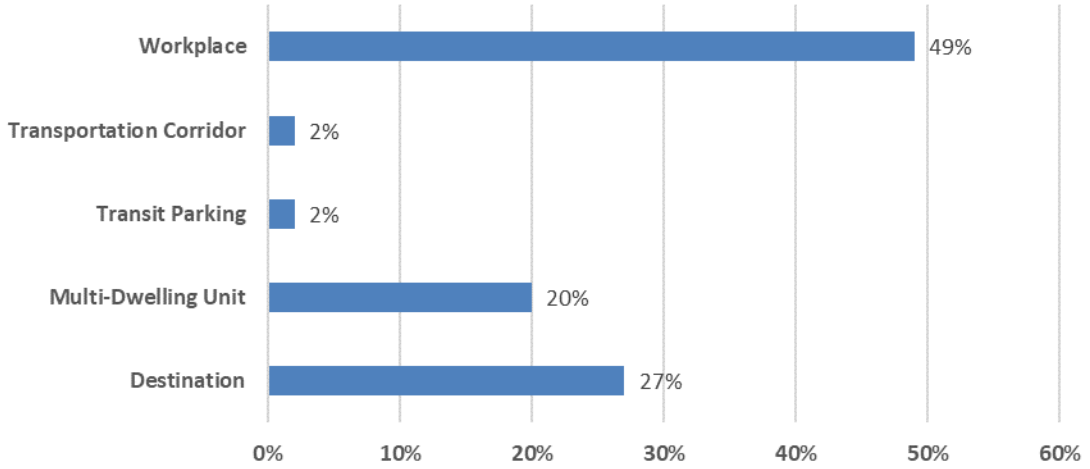
Since 2016, the Air District has administered the Charge! Program, which provides funding for the purchase and installation of publicly accessible charging stations in the Bay Area. This

Program is open to organizations including government entities, non-profits, and businesses. The Charge! Program provides fixed award amounts per each charging unit installed. For example, a Level 2 charging station is eligible for up to $3,000 in funding and a DC fast charging station is eligible for up to $18,000. Additional "plus-up" funding is available to promote ancillary benefits and reduce costs at project locations where there are higher barriers to implementation. These plus-up categories have included co-locating renewal energy generation such as wind or solar or installing charging at multi-unit dwellings.

The Clean Fleets Program opened in August 2018. This program provides funding to purchase or lease new zero-emission vehicles such as EVs (including electric motorcycles) and fuel cell vehicles. Similar to the Charge! Program, the Clean Fleets Program is open to government entities, non-profits, and businesses. Up to $2,500 is available in incentive funds per vehicle and up to $5,000 per motorcycle because emissions from conventional motorcycles are high.

Both the Charge! and Clean Fleets Programs are supported by funding from the Transportation Fund for Clean Air (TFCA), a $4 surcharge on California Department of Motor Vehicle registrations in the Bay Area. Since 2016, over $7.6 million has been awarded to Charge! Program projects to support the installation of over 2,900 publicly accessible charging stations in the Bay Area. Most chargers funded through the Charge! Program were installed or planned at workplace facilities, with other projects at transportation corridors, transit parking and multi-unit facilities (Figure 9). Future iterations of the Charge! Program may include additional incentives to increase EV charging station installations at underrepresented facility types or in impacted communities.

Figure 9: Awarded Charge! Projects by Facility Type from 2016-2018



Source: Bay Area Air Quality Management District (February 2019)

As the Charge! Program has grown, the utilization of Air District-funded stations has increased (Figure 10 and Figure 11). By the end of 2018, Air District-funded stations delivered over 1.6 GWh of electricity to EVs per year and is equivalent to reducing gasoline use by over 128,000

gallons or reducing ICE vehicle travel by 2.8 million miles.[20] In addition, the annual energy delivered per charger increased between 2016 and 2018. This is likely due to higher EV adoption, as well as the presence of additional charging stations. To maximize cost effectiveness of the Charge! Program, the energy delivered per charge will need to continue to increase. Because the Charge! projects are monitored for at least three years and the first projects were only awarded in 2016, usage data will continue to be collected for current and future projects. The initial trends in the usage data indicate we are on track to achieve higher usage levels. These trends also confirm the high and growing demand for publicly accessible chargers.

Figure 10: Total Annual Energy Dispensed (kWh) from Charge! Projects Installed

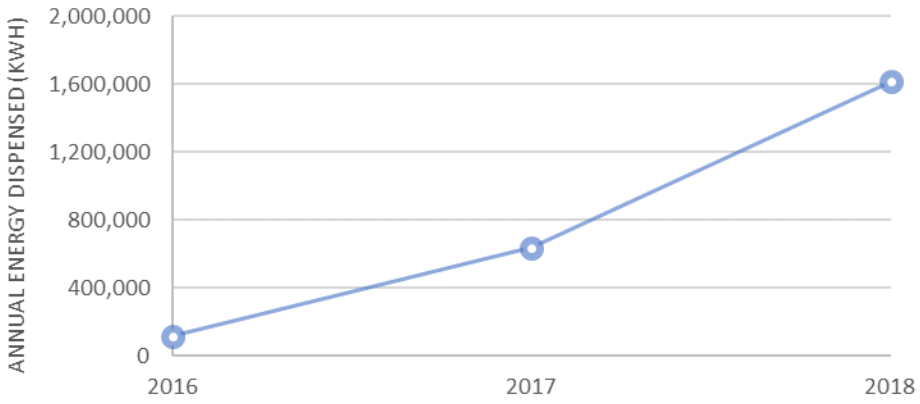


Table 10: Total Reduced Gasoline and Vehicle Miles Traveled from Charge! Projects Installed

Year	**2016**	**2017**	**2018**
Gallons of Gas Equivalent	9,052	50,722	128,481
Vehicle Miles Travelled Equivalent	196,692	1,102,122	2,791,703

[20] *Greenhouse Gas Equivalencies Calculator*, U.S. Environmental Protection Agency, December 2018.

Figure 11: Average Annual Energy Dispensed (kWh) Per Charger from Charge! Projects Installed

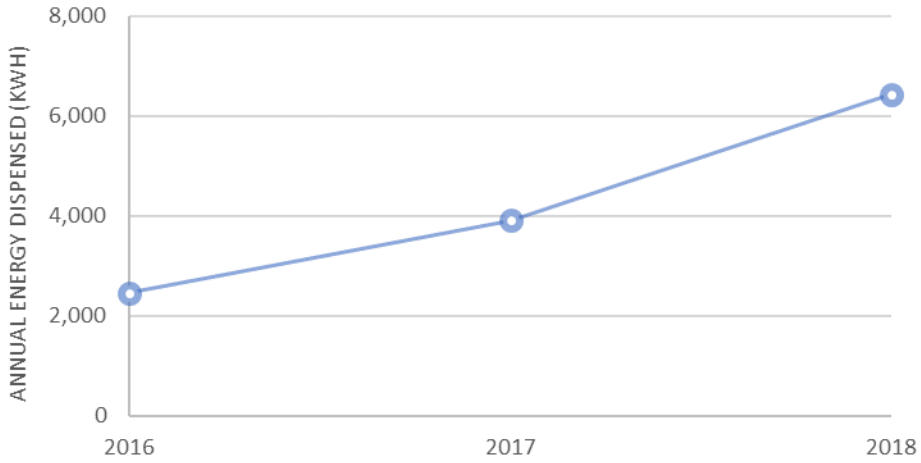


Table 11: Average Reduced Gasoline and Vehicle Miles Traveled Per Charger from Charge! Projects Installed

Year	**2016**	**2017**	**2018**
Gallons of Gas Equivalent	196	311	513
Vehicle Miles Travelled Equivalent	4,260	6,751	11,138

In addition to TFCA-funded programs, from 2015-2017, the Air District awarded projects through funding that resulted from a judgement issued in Reformulated Gasoline Antitrust and Patent Litigation. A total of 19 facilities were awarded which included 129 Level 2 charging stations and 11 DC fast charging stations and placed into service by September 2017. A report on the program's results identified 5 key project implementation and utilization barriers,[21] including:

- **Variability in costs**: Construction costs varied depending the scale of the project (number of chargers that were installed), especially on the existing electrical capacity of facilities and how many upgrades were needed.
- **Project delays**: On average, projects took 236 days to complete and most delays were attributed to electrical upgrades and interconnectivity issues with the grid.
- **Availability of chargers**: Facilities that limited accessibility only during business hours suffered from reduced utilization.
- **Pricing structure**: Higher fee structures disincentivized usage of the chargers.
- **Utilization of charging assets**: Charging station utilization could be increased by installing signage, designating parking stalls for EV charging, encouraging users to move their vehicles upon reaching enough charge and installing enough chargers to match to the size and dwell times of the parking facility.

[21] *EV Charging Demonstration Program*, Bay Area Air Quality Management District, April 2018.

These lessons about barriers to installing and using charging stations have been included in subsequent iterations of the Charge! Program.

Outreach and Partnerships

Since 2011, the Air District, in partnership with MTC, has sponsored the Bay Area EV Coordinating Council (EV Council), a collaboration forum for EV stakeholders including local and state governments, businesses, research institutions and non-profits. The EV Council is convened quarterly and addresses topics such as new vehicle and charging technologies, and EV-friendly ordinances adopted by local agencies, equity, and grant opportunities. The EV Council also is an ongoing platform to discuss emerging trends, share best practices, and facilitate innovation to address barriers to EV adoption.

The Air District also sponsors local events and staff attend and share information at regional conferences and meetings with local associations and government agencies (e.g. transportation, environment, public works, school districts, chambers of commerce).

OPPORTUNITIES TO ACCELERATE THE MARKET

The programs and policies to date from the Air District and partner organizations have been focused on getting the Bay Area EV market started. Indeed, the EV market in the Bay Area has seen a massive expansion in recent years, with significant growth in EV sales, infrastructure, and the availability and awareness of EV options for consumers. At the same time, our EV and GHG emissions reduction goals are ambitious, growing from 4% of vehicles to 90% of vehicles driven by Bay Area residents. Using a common framework to describe innovation adoption cycle (innovators, early adopters, early majority, late majority, and laggards), we are in the early adopter phase, which tends to include more socially forward users and have more financial fluidity. The early majority, late majority, and laggards, which typically represent most of consumers, include individuals with more skepticism, stronger resistance to change, or less financial fluidity. With the diversity of geographies, socioeconomics, and transportation needs across the Bay Area, we also need to be sure that technology transitions address the needs and concerns of all Bay Area residents.

Therefore, current and future priorities include actions that accelerate the market, focusing on influencing the large proportions of the population that may be more resistant to change, not just early adopters. These priorities will include understanding and addressing barriers to adoption in communities that have been slower to adopt EVs, updating the region's EV plans to reflect current technologies and trends, broadening the utilization of incentives to cover more communities, and ensuring effective coordination among EV programs to maximize impact (

Figure 12).

Figure 12: Air District Priorities in 2019 to Accelerate EV Market

1	Market research on consumers and EV market actors
2	Updated Bay Area EV Acceleration Plan
3	Move beyond early adopters and achieve equitable access to EVs
4	Expand and fill in gaps for charging infrastructure
5	Action-oriented and effective partnerships

Market research on consumers and EV market actors

Cost, range, and awareness are not the only considerations for consumers and businesses. To better understand the underlying sentiments that form barriers to EV adoption, and identify the best solutions to addressing those barriers, the Air District is starting work to survey consumers and businesses in the Bay Area. Currently, Air District staff have evaluated existing studies and collected anecdotal information on barriers to EV adoption and charging infrastructure. This effort will help us fill in gaps and collect thorough data sets across a diversity of EV market actors (e.g. low-income consumers, property owners, ride-hailing drivers, dealerships, fleet managers, etc.). This work will help improve incentive programs and develop new and better outreach programs and materials. The survey and research will also help inform the Air Districts current and future funding programs to ensure they are addressing appropriate barriers and economic levers.

Updated Bay Area EV Acceleration Plan

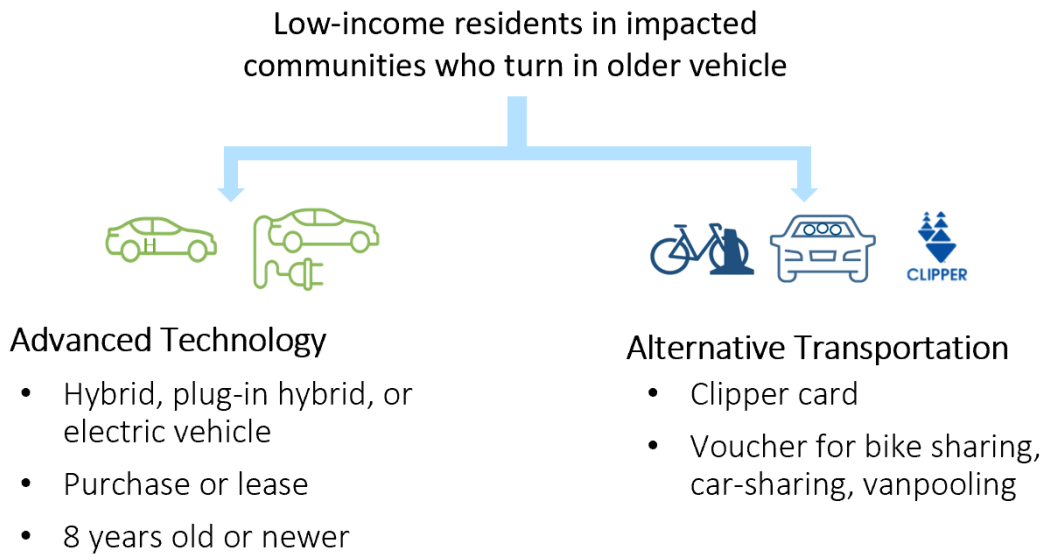
Since the Air District released the Bay Area EV Readiness Plan in 2013, by most measures, EV readiness has been realized in the Bay Area. It is time to focus on the rest of the potential EV market and for this reason, the Air District has started work on an update to the 2013 Plan, with a new "Bay Area EV Acceleration Plan". The Acceleration Plan will be data driven, including survey and research data on consumer, business, property owner, fleet manager, and transportation network company driver sentiments. Based on input on what would support Bay Area stakeholders, the new plan will include a specific outreach and coordination actions. These actions may include improved messaging and materials for consumers and EV market actors, targeted outreach that complements incentive programs, or coordinating the timeline of incentives and regulations. The Acceleration Plan will be informed by geographically diverse outreach and coordination with the EV Council.

Move beyond early adopters and achieve equitable access to EVs

Effectively reducing emissions from light duty vehicle will require wide-scale EV adoption in which all Bay Area residents participate regardless of income, ethnicity, or geographical area. Equitable access to EVs ensures that all Bay Area residents can benefit from lower fuel and maintenance costs as well an improved driving experience. This is the goal of the Air District's new Clean Cars for All Program, which provides qualifying low-income residents up to $11,500 for scrapping and older vehicle and switching to a clean transportation option (Figure 13). Participants will have the option to purchase or lease new and used hybrid vehicles, PHEVs, BEVs, or receive a transportation card for transit or car-sharing. The incentive funding is based on

participants' income level and which clean transportation or vehicle option they select. This program is currently in a soft launch to test the program's systems and processes and will fully launch in Spring 2019. The incentive program will include stakeholder engagement and outreach to impacted communities, case managers to support participants through the application process, and partnerships with dealers, vehicle scrappers, and community organizations around the Bay Area.

Figure 13: Overview of Clean Cars for All Program



Increasing opportunities for the public to interact with EVs can improve their perception of accessibility and availability and encourage them to consider an EV for their next vehicle purchase or lease. The Air District has offered incentives for vehicle fleets such as municipal jurisdictions, taxi companies, transportation network companies (TNC), and car sharing businesses and will be increasing outreach for these programs. These programs result in emissions reductions benefits by transitioning those fleets to cleaner vehicles while also increasing the number of EVs that the public may encounter in their daily lives, increasing public awareness of EVs and associated benefits.

Expand and fill in gaps in charging infrastructure

Recognizing that charging patterns and needs are shifting due to the increasing availability of longer range (200+ miles) EV models, the Air District will be expanding its focus to install fast chargers along major transportation corridors, which will also expand the network to support long-distance trips. These Ultra-fast (150+ kW) and DC Fast Chargers would be installed in "plazas" and will more operate like gasoline refueling stations. EV uptake among residents of multi-unit dwellings has lagged due to the lack of dedicated parking and the challenge of installing charging infrastructure in shared parking structures. In addition to incentivizing charging in multi-unit dwelling, the Air District will also continue to target workplace charging. By focusing on a combination of multi-unit dwellings, workplace charging, and ultra-fast charging plazas, we can increase charging accessibility for many potential EV consumers, especially those who do not live in single-family homes. A more visible and thorough EV charging network can reassure potential

EV consumers who are concerned about range anxiety. The Charge! Program was created with the ability to evolve with market conditions, especially to focus on gaps in charging infrastructure that can support low-income residents and geographies that have had low EV adoption so far.

Action oriented and effective partnerships

The Air District's investments and efforts have, and will continue to, play a significant role in catalyzing the Bay Area's shift towards zero emission transportation. In recent years, other organizations have also expanded programs to support the EV market. To meet the region's aggressive EV adoption goals, these regulatory, incentive, and outreach programs are all important and these efforts need to be coordinated to have maximum impact on driving EV adoption. For example, the EV Council will be the opportunity to leverage funding while also ensuring that incentives and awareness programs are impacting as many communities as possible. Another coordination challenge will be to time and integrate regulations and incentives so that both can be maximally effective. The Air District and MTC are updating the EV Council, from a mechanism to share best practices and network, to a group of organizations who are tackling specific and shared challenges.

Air District staff will continue to update the Mobile Source Committee and Board of Directors on progress for these ongoing programs and priorities. When the Bay Area EV Acceleration Plan is drafted after the stakeholder engagement process, that will also be another opportunity for further discussion and input.