



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

June 17, 2014

Richard Corey  
Executive Officer  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Re: Fiscal Year 2014-2015 Funding Plan for the Air Quality Improvement Program  
and Low Carbon Transportation Greenhouse Gas Reduction Fund Investments**

Dear Mr. Corey,

I am writing to provide you with the Bay Area Air Quality Management District's (Air District) comments on the proposed Fiscal Year (FY) 2014-2015 Funding Plan for the Air Quality Improvement Program (AQIP) and Low Carbon Transportation (LCT) Greenhouse Gas Reduction Fund Investments (GGRF) (Funding Plan). The Air District supports a number of elements that are proposed as part of the Air Resources Board staff's recommendations, but the use of the CalEnviroScreen model to identify disadvantaged and impacted communities needs to be revisited.

As you know, my staff has been actively engaged in commenting on the proposed Funding Plan via the working groups established to discuss the AQIP and GGRF investments. Your staff has been responsive to us and other air districts on a number of issues, and I thank you for your consideration in those areas. The Air District strongly supports the following elements of the recommended Funding Plan:

**ALAMEDA COUNTY**  
Tom Bates  
Scott Haggerty  
Nate Miley  
(Chair)  
Tim Sbranti

**CONTRA COSTA COUNTY**  
John Gioia  
David Hudson  
Mary Piepho  
Mark Ross

**MARIN COUNTY**  
Susan Adams

**NAPA COUNTY**  
Brad Wagenknecht

**SAN FRANCISCO COUNTY**  
John Avalos  
Edwin M. Lee  
Eric Mar  
(Secretary)

**SAN MATEO COUNTY**  
Carole Groom  
(Vice-Chair)  
Carol Klatt

**SANTA CLARA COUNTY**  
Cindy Chavez  
Ash Kalra  
Liz Kniss  
Jan Pepper

**SOLANO COUNTY**  
James Spering

**SONOMA COUNTY**  
Teresa Barrett  
Shirlee Zane

Jack P. Broadbent  
EXECUTIVE OFFICER/APCO

- **The recommended allocation of \$121 million for the Clean Vehicle Rebate Program (CVRP) is sufficient to accommodate market growth in FY14-15.** This program has succeeded in reducing the up-front cost of zero-emission vehicle technologies in the early stages of the market, and is one of the most successful incentive programs in California. The Air District supports the staff proposal to continue funding this AQIP category at a reduced amount, but we believe planning for the future of this program needs to be under taken now, not in 12 months (See comment #2 below regarding the funding plan).
- **The proposal to issue a two-year solicitation for a CVRP grantee** will assure a smooth transition of the CVRP from FY2014-15 to FY2015-16.
- **The determination that the goals of the AQIP and LCT Funding Plan are best achieved by not including provisions that would limit eligibility and participation at this early stage in the market.** Air District staff agrees that some of the measures that had been initially contemplated would hinder the positive vehicle adoption trends and, in other cases, would be cost prohibitive to implement.
- **The proposed increase in per-truck HVIP voucher amounts for e-trucks, voucher enhancement for vehicles operating in disadvantaged communities, funding for zero-emission truck and bus pilots, and support for advanced technology demonstration projects.** Together these measures will help to accelerate the commercialization of zero emission, medium-, and heavy-duty vehicles and engines

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and reduce exposure to toxic air contaminants and particulate matter in our most vulnerable and impacted communities.

- **The proposed allocation of \$9 million in funding for light-duty pilot projects** such as targeted car-sharing, increased incentives for public fleets, vehicle retirement and replacement plus-up, and financing assistance. Air District staff agrees with the recommendation that program funding levels should remain flexible and the Executive Officer should have authority to adjust funding amounts between these categories in order to optimize funding and meet demand.

In finalizing the recommendation for the Funding Plan, we recommend the following enhancements to strengthen the Funding Plan and maximize the AQIP and LCT investments:

1. **The use of the current CalEnviroScreen tool must be reevaluated to ensure that the Funding Plan achieves its intended objective:** to direct resources to the State's most impacted and disadvantaged communities and to provide economic and health benefits through much needed emission reductions. As stated in the attached letter, sent by the Air District to the Office of Environmental Health Hazard Assessment (OEHHA) on May 27, 2014, the use of the CalEnviroScreen tool omits many health-impacted areas that are in need of the benefits envisioned by SB 535.

Many health-impacted census tracts in the Bay Area do not have CalEnviroScreen scores in the top 20% on a state-wide basis, but nonetheless have health burdens that are in the top 20%. This is true, for asthma and low birth weight (LBW) infants, which are the two health indicators used by CalEnviroScreen. On the basis of health indicators alone (asthma plus LBW), 19% of the Bay Area census tracts would qualify as "impacted" (299 tracts out of 1562 would be in the top 20% in a statewide comparison). On the basis of statewide CalEnviroScreen scores, however, only 3% (49 tracts) qualify.

There are a number of reasons why the use of statewide CalEnviroScreen scores may under-represent health impacts in the Bay Area (and likely in urban areas in general). We have identified some of these reasons in the attached letter sent to OEHHA. Because a long-term solution to these issues will be technically difficult and time-consuming, we believe that the following two-step approach for allocating cap-and-trade auction proceeds under SB 535 is a practical alternative:

- A. Allocate SB 535 funds to regions in proportion to the region's population.
  - B. Within each region, distribute funds to impacted and disadvantaged communities based on a localized method. If an established method is not yet available, consider using CalEnviroScreen tool on a regional basis, using the top 20% of scores for the region.
2. **The Funding Plan should include a long term plan to guide future CRVP investments and to provide certainty to California's consumers and to industry stakeholders.** The proposed Funding Plan contains some metrics and milestones; these should be fully developed so that the amounts and future trajectory of this program is clear to industry and the public. Increased certainty allows industries, fleets, and individuals to better plan for future purchases; it also creates a road map to make investments in other areas as the EV market begins to not need subsidies. It also eliminates the future commitments created by waiting lists by clearly defining the financial programming now and in the future.

June 17, 2014

3. **ARB's proposal to provide a \$5,000 rebate for hydrogen fuel cell vehicles (FCEV) should be accompanied by a requirement that ARB staff develop a plan with a timeline to reduce the FCEV incentive to an amount equal to what is available for other zero emission vehicles.** While Air District staff supports ARB staff's proposal to increase the FCEVs incentive amount during its initial introduction to the market, staff recommends that ARB develop goals for the adoption of FCEVs and place a cap on the number of FCEVs vehicles that would qualify for this increased funding level and then lower the rebate amount once the cap is reached.
4. **The Vehicle Retirement and Replacement Plus-up Program should be open to the areas of the state with the highest vehicle populations, traffic congestion, and lengthy commute times.** Expanding the availability of these funds based on these criteria will greatly reduce the exposure to air toxics from vehicles, provide the greatest chance for program success, and achieve much needed reductions of criteria pollutants and Greenhouse Gas emissions. The Air District operates one of the longest standing, and most successful vehicle retirement programs in California, and has the expertise to successfully implement this program in the Bay Area.
5. **Opportunities for freight technology demonstration projects should be prioritized in areas with the largest populations, and greatest potential for adoption.** Targeting areas with the highest population density will reduce exposure to air toxics for the most people, and focusing on centers of freight movement establishes a local case-study for the community and industries that can be replicated for wider adoption of new technologies. The Air District has been involved in a number of technology demonstration projects, implemented several incentive programs that target the goods movement sector, and is in a major trade corridor which allows for the demonstration of various types of freight technology.

I would like to thank you for the opportunity to comment on the proposed revisions to the Funding Plan. If you have any questions regarding this letter, please feel free to contact me at (415) 749-5052 or Damian Breen, Deputy Air Pollution Control Officer at (415) 749-5041.

Sincerely,



Jack P. Broadbent  
Executive Officer/APCO

Encl: May 27<sup>th</sup> Letter from Air District to Dr. John Faust, OEHHA

JPB:DB:KMS

# **Attachment Letter**



**BAY AREA  
AIR QUALITY  
MANAGEMENT**

**D I S T R I C T**

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Jack P. Broadbent  
EXECUTIVE OFFICER/APCO

May 27, 2014

CalEnviroScreen  
c/o Dr. John Faust  
Chief, Community Assessment & Research Section  
Office of Environmental Health Hazard Assessment  
1515 Clay Street, Suite 1600  
Oakland, CA 94612

Re: Draft California Communities Environmental Health Screening Tool  
(CalEnviroScreen) Version 2.0

Dear Dr. Faust:

I am writing to provide comments on the Draft CalEnviroScreen Version 2.0 (CESv2) tool and associated report which were released for public review by CalEPA and OEHHA on April 21, 2014.

The April 2014 draft guidance and screening tool document indicates that among various potential uses, CalEnviroScreen will inform CalEPA's identification of impacted and disadvantaged communities pursuant to Senate Bill 535. SB 535 requires that the investment plan developed for available cap-and-trade auction proceeds direct resources to the state's most impacted and disadvantaged communities to provide economic and health benefits to these communities. **We strongly believe that CESv2 is not suitable for allocating SB 535 cap-and-trade auction proceeds.** This letter explains the reasons behind our position.

We are concerned that the use of CESv2 on a statewide basis would omit many health-impacted communities that are in need of the benefits that SB 535 envisioned. For example, areas in West Oakland identified through state and local studies to suffer the greatest air pollution impacts in the Bay Area do not appear in the top 20% of statewide CESv2 scores. Similarly, areas in Richmond, identified as impacted in other studies, do not appear in the top 20% of statewide CESv2 comparisons. These are among the most severely-impacted areas in the state, and any accurate and objective tool to measure such areas should reflect that.

Many health-impacted census tracts in the Bay Area do not have CESv2 scores in the top 20% on a statewide basis, but nonetheless have health burdens that are in the top 20%. This is true, for example, for asthma and low birth weight (LBW) infants, which are the two health indicators used in CESv2. On the basis of CESv2 health indicators alone (asthma plus LBW), 19% percent of Bay Area census tracts would qualify as "impacted"

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(299 tracts out of 1562 would be in the top 20% in a statewide comparison). On the basis of statewide CESv2 scores, however, only 3% (49 tracts) qualify.

There are a number of reasons why the use of statewide CESv2 scores may under-represent health impacts in the Bay Area (and likely in urban areas in general). We have identified some of these reasons in our detailed comments that follow. Because a long-term solution to these issues will be technically difficult and time-consuming, we believe that the following two-step approach for allocating cap-and-trade auction proceeds under SB 535 is a practical alternative:

- (1) Allocate SB 535 funds to regions in proportion to the region's population.
- (2) Within each region, distribute funds to impacted and disadvantaged communities based on a localized method. If an established method is not yet available, consider applying the CalEnviroScreen tool on a regional basis, using the top 20% of CES scores for the region.

Our Community Air Risk Evaluation (CARE) program's methodology is well suited for the second step. Another example of an established local method is the Metropolitan Transportation Commission's Communities of Concern.

As we indicated to you in our January 23, 2013 comment letter on the second working draft version of CalEnviroScreen, our Air District initiated the CARE Program in 2004. Over the past 10 years, in consideration of input received from a diverse stakeholder work group known as the CARE Task Force, our staff has updated and refined the technical basis for identifying impacted communities in the Bay Area. The results of this work have been used to prioritize a broad array of actions designed to foster healthy communities through our Clean Air Communities Initiative. Additional details on the CARE Program are provided in our recent report entitled *Improving Air Quality & Health in Bay Area Communities: Community Air Risk Evaluation Program Retrospective & Path Forward (2004 – 2013)*, Bay Area Air Quality Management District, April 2014 (available at <http://www.baaqmd.gov>).

The work of CalEPA and OEHHA in developing CESv2 is an important step toward the goal of identifying communities with disproportionate health impacts from environmental pollutants. However, this screening tool needs additional work to rank impacts within a region and needs significant improvements before it can be used to rank communities

across regions of the state. Our specific technical comments on the current draft version of CalEnviroScreen follow.

- (1) With CESv2, OEHHA has transitioned to the use of pollution burden and population characteristics in census tracts rather than ZIP codes. The use of census tracts as the unit of analysis provides certain benefits in that census tracts contain roughly equal population numbers, thereby providing a better representation of aggregate population health risks that result from environmental exposures. On an overall basis, census tracts also provide a finer spatial scale of analysis than ZIP codes. This degree of refinement is not uniform, however – it is substantially more evident in urbanized areas with high population densities. For example, the average census tract size in the SJVAPCD (31.7 square miles) is about nine times larger than in the BAAQMD (3.6 square miles). The use of census tracts therefore introduces a bias where more spatially-resolved data are available for use in heavily populated urban areas relative to less populated areas.

The Bay Area maps of impacted communities have changed dramatically from CESv1.1 to CESv2, with far fewer areas now being identified as impacted. Our staff has examined some of the Bay Area zip code areas that were identified as impacted under the CESv1.1 that have now dropped out of this designation based on the use of CESv2. The primary reason identified for this change is the increased spatial refinement resulting from transitioning zip codes to census tracts. Since the same level of spatial refinement has not occurred uniformly throughout the state within CalEnviroScreen, it is not acceptable to use it for inter-regional comparisons.

An example of the way that spatial refinement can influence designations is given by comparing San Francisco's Bay View/Hunters Point (BVHP) neighborhood in CESv1.1 versus CESv2. In CESv1.1, BVHP zip code 94124 has a summary score in the top 10 percent of zip codes statewide because it has high values for both pollution burden indicators and population characteristic indicators. However, in CESv2, census tracts on the eastern side of this zip code area have high pollution burden indicators (near the freeway), but relatively low population characteristic indicators. Census tracts on the western side of the BVHP zip code area have high population characteristic indicators but relatively low pollution burden indicators. The resulting CESv2 summary scores for these census tracts are below the top 20 percent statewide. It is logical to expect that if a similar degree of spatial refinement could be extended to less populated regions, the

statewide map of impacted areas would change significantly from its current form.

- (2) The guidance for CESv2 indicates that CalEnviroScreen does not provide expressions of health risk, but rather a relative ranking of communities based on a selected group of datasets through the use of a summary score. In a summary score approach, the selection of appropriate indicators, and the relative importance (weighting) of these indicators as determinants of health, is critically important. In CESv2, much has been done to select a broad array of indicators (i.e., seven exposure indicators, five environmental effects indicators, three sensitive population indicators, and four socioeconomic factors indicators). Almost nothing has been done, however, to determine the relative importance of these indicators (all indicators are weighted equally, except for the five environmental effects indicators which are weighted at one-half the others). **The equal weighting of indicators is a critical failing of this assessment tool when used to allocate cap-and-trade (air quality) funding.**

Much of this decision may have to do with a lack of a scientific basis to do otherwise. Nonetheless, the equal weighting of all indicators introduces significant uncertainties in the summary scores and the associated relative rankings. We recommend that the guidance issued with CESv2 better document these uncertainties, and advise users to review both the scores of individual indicators and the summary scores.

Ozone and PM<sub>2.5</sub> exposures are an example of indicators that likely have much different relative health impacts. The ozone indicator in CESv2 is given the same weight as PM<sub>2.5</sub>, but PM<sub>2.5</sub> has far greater health impacts with strong causal relationships established for mortality and a variety of serious cardiovascular health effects.

Many of the indicators included in the pollution burden score have heavily skewed distributions. For example, over 60 percent of all tracts receive scores of zero for pesticides, and over 20 percent of tracts receive a score of zero for ozone. Environmental effects indicators are similarly skewed with over one-third of all tracts receiving marks of zero for solid waste sites, hazardous waste, cleanup sites, and impaired water bodies. The problem with skewed indicators is that top scores in a skewed index exert a greater influence on the top CESv2 summary scores relative to indicators with scores that are more uniformly distributed. From the documentation, it is clear that more weight is not intended to be given to these skewed indicators. Nor

should it be. For example, the environmental effects indicators are given half the weight of the exposures indicators because the contribution to the pollutant burden from the environmental effects indicators "was considered to be less than those from sources in the exposures indicators." Yet these skewed indicators have in fact been overrepresented in the CESv2 scoring. Many urban areas tend to have zero values in these skewed indicators with the unintended result that Bay Area tracts (and many others) have been under represented relative to the health indicators.

- (3) The income thresholds used in the poverty indicator in CESv2 are uniform throughout the state even though there are large regional differences in the cost-of-living in California. OEHHA should consider using different income thresholds for establishing the poverty indicator in various regions based on cost-of-living considerations.
- (4) The pesticide use indicator in CESv2 is based on production agricultural pesticide use records and excludes many pesticide uses such as those in homes and industry for which data are only available at the county scale. The result of this is that zero pesticide scores are determined in CESv2 for most urban areas even though significant pesticide exposures occurs in these areas (see, for example, *Pesticides in House Dust from Urban and Farmworker Households in California: An Observational Measurement Study*, Environmental Health, 2011, 10). The use of county-level pesticide data for non-production and non-agricultural uses may be preferable to the use of no data at all. These county-level data could be spatially disaggregated based on the use of appropriate surrogates.
- (5) Sixty two census tracts statewide appear to be missing data on key measures of population characteristics. These tracts do not appear to be included in the online mapping tool (or KML file). However, these tracts are apparently included in the calculation of percentiles for exposure and environmental effects, and thereby influence the cumulative scores for other tracts. Either population data should be supplied for these tracts or they should be withheld in the calculation of percentiles.

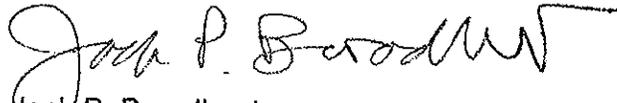
To conclude, CESv2 is an inappropriate tool to use to choose which disadvantaged communities should receive cap-and-trade auction proceeds. That underlying goal, to benefit disproportionately impacted communities, is a critical public health goal that deserves a better solution.

May 27, 2014

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Thank you for your consideration of these comments. If you have any questions regarding this letter, or would like to discuss, please contact Dr. Phil Martien of my staff (415-749-4660, [pmartien@baaqmd.gov](mailto:pmartien@baaqmd.gov)).

With regards,

  
Jack P. Broadbent  
Executive Officer/APCO

cc: Matthew Rodriques, CalEPA  
Mary D. Nichols, CARB