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Lisa Williams
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1001 I Street
Sacramento, California 95814
Submitted electronically via <https://www.arb.ca.gov>

Re: Proposed VW Settlement Beneficiary Mitigation Plan

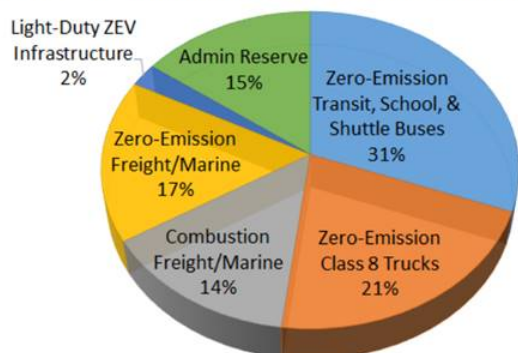
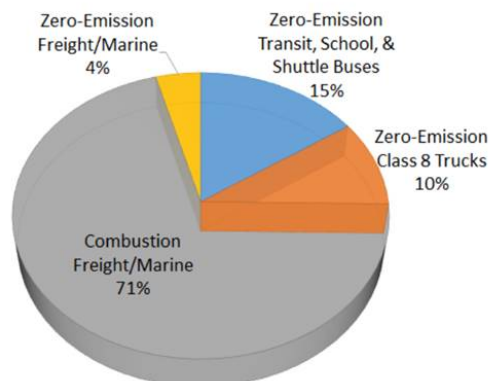
To Whom It May Concern:

Thank you for the opportunity to comment on the Proposed Volkswagen (VW) Settlement Mitigation Plan released on April 25, 2018. SoCalGas appreciates the work of Air Resources Board (ARB) staff for this undertaking. The VW Settlement funds are integral to the state in achieving its air quality and climate goals. Combined with existing Cap and Trade Auction Proceeds, there are unprecedented amounts of funding available for environmental projects in the state. While funding amounts are at all-time highs, it is a fraction of what is needed to meet the state's goals and it is not guaranteed to be available in the future. Therefore, it is important that the state utilize the funds effectively and maximize the environmental benefit of the funds. To that end, SoCalGas would like to provide the following comments specific to the Mitigation Plan.

Funds should be allocated to projects that are the most cost-effective in reducing NOx emissions

The low NOx natural gas trucks are the most cost-effective, at \$5,000-\$30,000 per ton, of all the alternative fuel vehicle technologies, yet only \$60 million is allocated to this category. The overwhelming majority of the funding (\$290 million) is being allocated to buses, zero emission class 8 trucks, and zero emission freight/marine projects, which have cost-effectiveness values of up to \$180,000, \$95,000, and \$350,000 per ton, respectively. The zero-emission option is 3 to 100 times more in cost, which equates to significantly less NOx reductions. The VW settlement funds are required to direct its resources specific to NOx reduction and the most cost-effective technology to achieve this today being allocated the smallest fraction of the funds is clearly a missed opportunity and an oversight.

Figures 1 and 2 of the Proposed Mitigation Plan show the clear discrepancy of the allocations compared to the emission reductions. As shown in Figure 1, only 14 percent of the total funding is allocated to the Combustion Freight/Marine category. Conversely, this category achieves 71 percent of the NOx reductions. Reallocating funding from the categories that are not as cost-effective would result in exponentially greater emission reductions immediately. Based on SoCalGas calculations, if just 25 percent of the funds were allocated to Low NOx trucks, emission reductions would be increased by three to five times.

Figure 1: Recommended Project Allocation Distribution**Figure 2: Estimated NOx Reduction Distribution by Recommended Project Category**

The plan only looks to achieve the minimum reductions instead of achieving the maximum potential reductions.

Per the VW Settlement, the state of California is required to achieve at least 10,000 tons reductions of oxides of nitrogen (NOx). The Proposed Mitigation Plan states that “CARB staff estimates the excess NOx in California is about 10,000 tons.” As the VW Settlement is designed to mitigate NOx emissions, the funding should be used to maximize NOx emission reductions. While the Proposed Mitigation Plan acknowledges that the excess NOx mitigation is achieved by investing into low NOx combustion technologies (p. 4), it fails to maximize the investment here and therefore, prevents California from achieving the maximum emission reductions possible. With eight of the ten most polluted cities in the nation identified to be in California, inclusive of areas identified to be in nonattainment, the funding should be maximized to achieve NOx emission reductions today. More funding should be allocated to the low NOx combustion category to maximize benefits.

There is an immediate need for emission reductions to meet attainment requirements and protect public health

The South Coast and San Joaquin Valley air basins are in nonattainment for ozone and particulate matter 2.5, respectively. In their Air Quality Management Plans (AQMPs), which were subsequently adopted into the State Implementation Plan, both rely on the deployment of low NOx truck technology to meet attainment standards. The South Coast Air Quality Management District has stated in their AQMP that they require \$500 million per year for low NOx trucks to meet attainment, while the San Joaquin Valley Air Quality Management District has stated that it would require \$400 million per year.

In the Proposed Mitigation Plan, \$90 million is allocated for the Class 8 Freight and Port Drayage Trucks funding category. The Proposed Mitigation Plan goes on to say, “The first installment of this funding will be \$27 million, and the next installment(s) will be determined during the implementation process.” (p. 23) The Proposed Mitigation Plan is deferring the use of funds for an undetermined amount of time until zero emission technology becomes available.

As the proposed Mitigation Plan points out: “Statewide, about 12 million Californians live in communities that exceed the federal ozone and particulate matter (PM2.5) standards. Despite improvements made through California’s groundbreaking air pollution regulations, incentives for

advanced technology vehicle deployments, and clean energy policies, the South Coast and the San Joaquin Valley are the only two areas in the nation with an Extreme classification for the federal ozone standard and also experience some of the nation's highest PM2.5 levels.” This is not a prudent approach to the funding as these regions need immediate funding to get air quality to acceptable public health levels. The funding should be reallocated to cost-projects that can achieve emission reductions today to protect public health.

No analysis was performed on how to maximize funding

ARB staff has indicated in public meetings that the only plan alternative was to utilize all of the funding on buses. Staff stated that a “Bus Only” alternative would not meet the minimum NOx reductions required by the VW Settlement and was therefore not considered. No other funding options were presented to the public. ARB has focused on transparency in all other funding proceeding (Low Carbon Transportation, Prop 1B, Carl Moyer), however the Mitigation Plan, with no other alternatives presented, was not prepared in a transparent fashion.

Additional funding scenarios, including separate maximum reduction scenarios for NOx and greenhouse gas emissions, should be analyzed by staff and presented to the public and the Board for consideration.

The Mitigation Plan should focus on largest polluters to help meet air quality and climate goals

The funding can be utilized more effectively to meet air quality and climate goals. As an example, \$130 million (30 percent) of the funds are allocated to buses, however this large investment would have little impact to state and regional emission goals because buses simply do not have large amounts of emissions when compared to other sources. In the South Coast Air Basin, buses account for less than three percent of the NOx emissions of the region. Also, buses account for less than one half of one percent of the state greenhouse gas emissions¹.

At a minimum, the plan should consider once again the cost-effectiveness of the technologies. The analysis in the Proposed Mitigation Plan assumes an average bus grant of approximately \$300,000 per bus for zero emission technology. This translates to \$130 million funding 425 buses. ARB has presented that the incremental cost of a low NOx natural gas bus over a diesel bus is approximately \$50,000². Funding this incremental cost would fund 2,600 buses. Low NOx engines are certified to be 90% cleaner than existing diesel trucks but a study commissioned by ARB and completed by Southwest Research Institute showed that in some transit duty cycles, the natural gas 12 liter near zero engine showed 0.000 grams (undetectable) of NOx per brake horsepower/hour (g/bhp-hr)³. Given the significant NOx reductions produced by the low NOx engines at undetectable levels, it would be in fiscally irresponsible to fund 425 zero emission buses versus 2,600 natural gas buses, which stands to help meet air quality goals and maximize the NOx emissions reduction intent of the VW trust.

Heavy duty trucks account for fifteen times (2.0 million metric tons for buses vs. 29.9 million metric tons for heavy-duty trucks⁴) more greenhouse gas emissions in the state and seven times (8 tons of NOx per year for buses vs. 56 tons of NOx per year for heavy-duty trucks) more NOx in the South Coast Air Basin

¹ ARB Greenhouse Gas Emission Inventory - Query Tool for years 2000 to 2015 (10th Edition)

² California Air Resources Board Bus Prices Analysis (Draft) - Updated on 2/10/2017

³ “Evaluating Technologies and Methods to Lower Nitrogen Oxide Emissions from Heavy-Duty Vehicles”, Southwest Research Institute, April 2017

⁴ ARB Greenhouse Gas Emission Inventory - Query Tool for years 2000 to 2015 (10th Edition)

and therefore would have a greater impact on reducing air and greenhouse gas emissions. There is funding allocated to heavy-duty trucks in the Proposed Mitigation Plan, however most of it is allocated to the Zero Emission Class 8 Freight and Drayage Truck category. While it is important to invest in emerging technologies, the intent of the VW mitigation trust is to reduce NOx immediately to correct the adverse effects of the air quality in California. And as such, the funding allocations should be directed to technologies that can produce immediate NOx reductions. The proposed Mitigation Plan's focus on emerging technologies is inappropriate from a time and fiscal responsibility perspectives. The emerging technology projects are currently not cost-effective (up to \$180,000 per ton) and cannot achieve immediate emission reductions, which is why most of the funding in this category is being deferred to "undetermined years." It is critical that emission reductions are maximized and achieved as soon as possible to protect public health and to help areas get into attainment.

In December of 2017, the California Air Resources Board certified the 11.9-liter natural gas engine to meet the Optional Low NOx Standard of 0.02 g/bhp-hr, which is 90 percent cleaner than existing diesel technology. The use of the low NOx engine alone, or coupled with renewable gas, will achieve significant NOx and greenhouse gas emission reductions. ARB recently awarded the company, AMP Americas, a carbon intensity (CI) score of -254.94 grams of carbon dioxide per megajoule (gCO₂e/MJ), which is the lowest ever issued by CARB. Over 60 percent of the natural gas used in transportation is currently renewable gas. The increased implementation of renewable gas will help the state meet its climate goals immediately.

The Mitigation Plan needs to allocate more funding to the Combustion Freight category with a focus on Class 8 and Drayage, which will yield significantly higher emission reductions in the most cost-effective manner to help the state meet its air quality and climate goals, while also fulfilling the intent of the VW mitigation trust. .

We appreciate the opportunity to comment on the Proposed Mitigation Plan and look forward to continuing working with ARB.

Sincerely,

A handwritten signature in black ink, appearing to read 'KM' or similar initials, followed by a surname.

Kevin Maggay
Policy and Environmental Strategy