California Air Resources Board

Appendix C

Department of Finance (DOF) Comments on the Standardized Regulatory Impact Assessment (SRIA) and the California Air Resources Board's (CARB) Responses

Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation

Date of Release: September 20, 2022

Date of Hearing: November 17, 2022

1. **DOF Comment: The SRIA must disclose disparate impacts, including those on state agencies that may bear proportionately higher costs relative to others. Currently, the SRIA reports separate costs only for the UC and CSU systems, and these cost estimates must be expanded to include other individual agencies that might also use a disproportionately larger number of the state's off-road vehicles.**

Staff Response:

CARB cannot precisely quantify an individual fleets direct costs since it would be speculative of CARB to assume a specific compliance strategy, and different compliance strategies have different costs. In Section 4.2 of the SRIA (starting on page 42), CARB attempted to provide an overview of which State agencies owned the most vehicles subject to the Proposed Amendments and therefore could have higher costs. Specifically,

> *The vehicle and maintenance costs will not be spread across all State government agencies. Based on data reported in DOORS, the California Department of Transportation owns and operates about 40 percent of all the State-owned vehicles and, along with the California Department of General Services, does the most public works contracting that would be subject to the Proposed Amendments. Other agencies that will be impacted by the Proposed Amendments include, but are not limited to, the California Department of Forestry and Fire Protection and the California Department of Parks and Recreation both with approximately 7 percent of reported State-owned vehicles and the California Department of Fish and Wildlife with approximately 6 percent of reported State-owned vehicles.*

Actual costs for an individual fleet, including State government fleets, are dependent on many factors, including the current fleet makeup (e.g. higher percentage of Tier 0, Tier 1, or Tier 2 vehicles) and size of the fleet. Fleets that would have a higher cost burden are:

- Larger fleets (i.e., those with more vehicles),
- Fleets that have a relatively high percentage of vehicles subject to the Tier 0, Tier 1, or Tier 2 phase-out requirements of the Proposed Amendments, and
- Fleets that must comply with the large fleet requirements.[1]

Based on these assumptions and using information self-reported to CARB[2] by the agencies, CARB has identified the State and local agencies that CARB believes may have a higher cost burden. There are limitations to this approach, however, since an individual fleet chooses their compliance strategy, and the reported data reflect the vehicle information reported as of July 1, 2022.

The following four tables present the top ten State and local agency fleets by the absolute number of impacted vehicles (those vehicles that are reported as Tier 0, Tier 1, or Tier 2 and

[1] All state agencies are required to comply with the large fleet requirements of the Off-Road Regulation.
[2] Data recovered from DOORS, the reporting tool for the Off-Road Regulation, on July 1, 2022.

subject to the tier phase-out requirement in the Proposed Amendments), and by the proportion of impacted vehicles in their fleets, two of the possible criteria that may identify fleets subject to greater impacts. Table 1 displays the top ten State agencies with the highest count of vehicles impacted by the Proposed Amendments. Table 2 displays the top ten state agencies with the most (as a percent of the total) vehicles impacted by the Proposed Amendments. Similarly, Table 3 displays the top ten local agencies with the highest count of vehicles impacted by the Proposed Amendments, and Table 4 displays the top ten local agencies with the most (as a percent of the total) vehicles impacted by the Proposed Amendments. Note that many of the agencies identified in Table 2 and Table 4 have only a few vehicles subject to the Proposed Amendments and should have relatively small fiscal impacts from the Proposed Amendments. CARB estimates that State agencies own one percent and local agencies own three percent of the statewide population off-road vehicles subject to this regulation.

Table 1. Top ten state agencies with the highest count of vehicles impacted by the Proposed Amendments

Agency Name	**Number of vehicles impacted (percent of total vehicles in the agency's fleet)**
Caltrans	362 (44%)
California Department of Parks and Recreation	56 (29%)
California Department of Fish and Wildlife	26 (38%)
California Department of Water Resources	22 (28%)
University of California, Davis	13 (42%)
California Department of Corrections and Rehabilitation - IWL (CDCR)	11 (30%)
University of California Santa Barbara	8 (38%)
CDCR/Sierra Conservation Center	6 (100%)
Coast Community College District	5 (63%)
California Department of Veterans Affairs	5 (56%)

Table 2. Top ten state agencies with the most (as a percent of total) vehicles impacted by the Proposed Amendments

Agency Name	**Number of vehicles impacted (percent of total vehicles in the agency's fleet)**
CDCR/Sierra Conservation Center	6 (100%)
California Correctional Center	2 (100%)
California Exposition and State Fair	2 (100%)
Calipatria State Prison	2 (100%)
Lost Hills Water District	1 (100%)
California Department of Corrections and Rehabilitation	1 (100%)
Coast Community College District	5 (63%)
Southwestern Community College District	3 (60%)
California Department of Veterans Affairs	5 (56%)
Orange County Fair & Event Center	3 (50%)

Table 3. Top ten local agencies with the highest count of vehicles impacted by the Proposed Amendments

Agency Name	**Number of vehicles impacted (percent of total vehicles in the agency's fleet)**
City of Los Angeles / General Services	242 (39%)
City of San Diego	47 (17%)
Kern County Public Works	38 (32%)
Public Works, Santa Cruz County	34 (68%)
Public Works, Santa Barbara County	31 (23%)
Department of Transportation, Mendocino County	30 (79%)
City of Fresno Fleet Management	27 (31%)
Los Angeles County Public Works	27 (10%)
Sweetwater Union High School District	25 (96%)
Public Works, Siskiyou County	24 (63%)

Table 4. Top ten local agencies with the most (as a percent of total) vehicles impacted by the Proposed Amendments

Agency Name	Number of vehicles impacted (percent of total vehicles in the agency's fleet)
Colton Joint Unified School District	9 (100%)
Ironhouse Sanitary District	8 (100%)
City of Thousand Oaks	7 (100%)
Pomona Unified School District	7 (100%)
San Diego Unified School District	7 (100%)
North Kern Cemetery District	6 (100%)
Carmichael Water District	6 (100%)
Sonora Union High School District	5 (100%)
City of Carpinteria	4 (100%)
Downey Unified School District	4 (100%)

The new requirements for public works awarding bodies will be directly proportional to the number of publics works projects an agency undertakes. During the development of the cost estimates for this requirement, CARB reviewed the Capital Improvement Plans of different agencies. These plans reveal a trend that entities with larger populations tend to have a larger number of public works projects. Using population as a surrogate, CARB anticipates that agencies located in the most populous areas of the State will be most impacted by this requirement. Table 5 displays the counties with the highest projected populations in 2024, when this requirement begins to take effect[3]. Compliance costs for this requirement will vary, based on the internal policies and procedures of each affected organization. CARB has attempted to align these requirements with the reporting required by the Department of Industrial Relation's public works programs in an effort to minimize the compliance burden by mirroring procedures these agencies are already undertaking. More details on how CARB estimated this cost can be found in Appendix B of the ISOR, Standardized Regulatory Impact Assessment.

[3] California Department of Finance (2021). Report P-2A: Total Population Projections, 2010-2060, California and Counties. Retrieved July 7, 2022, from *https://dof.ca.gov/forecasting/Demographics/projections/*

Table 5. Counties in California with the highest projected population in 2024

County Name	Projected 2024 Population
Los Angeles County	10,239,018
San Diego County	3,383,663
Orange County	3,238,007
Riverside County	2,564,271
San Bernardino County	2,253,485
Santa Clara County	2,015,833
Alameda County	1,713,352
Sacramento County	1,600,724
Contra Costa County	1,187,319
Fresno County	1,045,168

2. **DOF Comment: The SRIA assumes that incidence-per-ton factors calculated for the period from 2014 to 2016 will hold in the future, while it may be that additional years of data may change these factors and/or causal relationships and hence change the estimated benefits. Or provide an explanation for why the period only from 2014 to 2016 is the most appropriate one to use.**

Staff Response:

The SRIA uses the most updated incidence-per-ton (IPT) factors available to estimate future health benefits. CARB will consider potential updates to the IPT factors and underlying data in the future, but additional analyses would be needed to ensure that the IPT factors for human-made sources of air pollution are not affected by events such as the occurrence of high wildfire seasons after 2016, analyses which are not available yet. There is a strong body of epidemiological research supporting the causal and likely causal relationships between particulate matter 2.5 (PM2.5) exposure and the adverse health outcomes we evaluated, and this research has grown over the years. Additionally, recent studies continue to show that exposures to even low PM2.5 concentrations, below the levels of current air quality standards, can lead to adverse health outcomes. Therefore, the causal and likely causal relationships reflect the most recent science.

3. **DOF Comment: The SRIA assumes that vehicle and engine activity profiles from 2020 are the most representative profiles. However, 2020 may not be the most appropriate year to measure vehicle activity (as opposed to 2021, if available, or 2019) as construction activity was unusually low for due to the COVID-19**

Pandemic, and the SRIA should demonstrate that the 2020 profiles are not an outlier or use more representative data.

Staff Response:

CARB staff believes that the comment about the vehicle and engine activity profiles being based on 2020 activity is from the following statement on page 31 of the SRIA in the list of data sources incorporated into the 2022 CARB Construction, Industrial, Mining and Oil Drilling Emissions Inventory:

> *Activity hours profiles created from the results of the 2020 Off-Road Activity Survey, an optional survey conducted via the DOORS online reporting system.*

CARB's description of this data source was a bit ambiguous. The 2020 Off-Road Activity Survey was an optional survey that was conducted via DOORS, the reporting tool for the Off-Road Regulation, in the summer of 2020, with questions about fleets, their vehicles, and vehicle activity regarding the time period between January 1, 2019 and December 31, 2019. There was, additionally, one free-response question about how the fleet's business had been affected in 2020. The responses to this survey reflect 2019 activity, prior to the circumstances of 2020, and can be considered representative data. The 2019 data is the most recently available data. More information about this survey can be found in Appendix F of the Staff Report for the Public Hearing to Consider Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation.

4. **DOF Comment: The SRIA assumes that under current law, operators would replace enough vehicles every year to keep the average fleet age the same as it was in 2013. As operators' vehicle replacement rates could significantly affect both the costs and the benefits, the SRIA should either base its estimated replacement rate on the most relevant data or justify why the 2013 benchmark is the most appropriate target age.**

Staff Response:

To establish a baseline for comparison for the Proposed Amendments, CARB modeled a baseline that reflects implementation and full compliance with existing federal and State emission standards for new off-road diesel engines and diesel fuel, as well as with the current Off-Road Regulation which applies to fleets operating vehicles with in-use off-road engines, as amended in 2010 (current law). Under current law, the Off-Road Regulation's final compliance occurs when a fleet meets its final fleet average target. The current law establishes a date on which fleets are to meet this final target or turn over a minimum of 10 percent of the fleet's total fleet horsepower every year until that final fleet average target is met. The final fleet average target dates set in current law are January 1, 2023, for large and medium fleets, and January 1, 2028, for small fleets. After the fleet meets its final fleet average target, the current law only requires that it maintain its fleet average target in subsequent years; no further vehicle replacements are required. Based on data reported to CARB in DOORS, CARB has observed that the average age of fleets dropped noticeably

during the regulatory period after 2013 to comply with current law. For example, large fleets had an average age of 9.2 years in 2013, and by 2020 that average age dropped to 7.8. To model a baseline scenario through 2038, CARB needed to assume a rate at which a fleet would replace its vehicles in a situation with no law requiring them to replace vehicles. CARB assumed fleets would return to business practices that they were implementing prior to the initial compliance requirements of the current law.

The current law reflects amendments that were adopted in 2010, with initial performance requirements starting in 2014 for large fleets, 2017 for medium fleets, and 2019 for small fleets. The 2013 benchmark is the most appropriate average age target because it was prior to the initial performance requirements' compliance dates, and it was the earliest year that CARB had a comprehensive dataset of reported vehicles in DOORS. Using a benchmark year after 2013 would have the effect of establishing an average age that is artificially younger than fleets would have been prior to the current law taking effect, and the CARB baseline model would have fleets replacing vehicles at a younger age than what was modeled in the SRIA. Using a benchmark year prior to 2013 was also not practical, as CARB's fleet dataset was less comprehensive and less accurate, and no other entity requires fleets report this information, so there is no other data available as a surrogate.

References

California Department of Finance (2021). Report P-2A: Total Population Projections, 2010-2060, California and Counties. Retrieved July 7, 2022, from *https://dof.ca.gov/forecasting/Demographics/projections/*