



## California Council for Environmental and Economic Balance

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October 18, 2021

Clerk of the Board

California Air Resources Board

Submitted Electronically to <http://www.arb.ca.gov/lispub/comm/bclist.php>

RE: Proposed 2020 Mobile Source Strategy, September 28, 2021 Final Draft Document

Chair Randolph and Members of the Board,

The California Council for Environmental and Economic Balance (CCEEB) appreciates the opportunity to submit these final comments on the 2020 Mobile Source Strategy (MSS). Our primary interest is in ensuring that California Air Resources Board (CARB) analysis and development of control strategies for the 2022 State Implementation Plan (SIP) are technically sound, meet federal Clean Air Act and California Health & Safety Code (H&SC) requirements, and maximize public health benefits from CARB climate and criteria pollutant policies. Attached are comments that CCEEB submitted to staff on October 21, 2020, that describe in greater detail our concerns with CARB's approach to H&SC requirements, particularly those mandated by [SB 44](#) (Skinner, 2019), which directed CARB to update the 2016 MSS "for the purpose of bringing the state into compliance with federal ambient air quality standards and reducing motor vehicle greenhouse gas emissions from the medium-duty and heavy-duty vehicle sector."

Our three main points can be summarized as follows:

**The 2020 MSS is a top-down "vision" that lacks *any* consideration of technological feasibility or cost.** As such, the outcomes it models should not be confused with what may be "reasonable and achievable" in practice or in demonstrating the potential for real-world implementation. It also means that the 2020 MSS runs counter to SB 44 and H&SC Section (§) 43024.2(a)(1)<sup>1</sup>, as well as the Governor Newsom's EO N-79-20.<sup>2</sup> CCEEB asks the Board to make clear to public stakeholders and CARB staff that future rules and policies must be based on full regulatory analyses that include technological feasibility and cost effectiveness, and that such rule-specific

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<sup>1</sup> H&SC § 43024.2(a)(1): "The state board shall recommend reasonable and achievable goals for reducing emissions from medium duty and heavy-duty vehicles by 2030 and 2050, respectively, as part of the comprehensive strategy based on factors that include, but are not limited to, the state's overarching emissions reduction goal established in Section 38566, the goals established in the California Sustainable Freight Action Plan completed in response to Executive Order No. B-32-15, technological feasibility, and cost-effectiveness."

<sup>2</sup> EO N-79-20: "In implementing this Paragraph, the State Air Resources Board shall act consistently with technological feasibility and cost-effectiveness."

analyses will set the basis for implementation schedules and rule requirements, not the MSS modeling, as it would be inappropriate for the purpose.

**The Clean Air Act requires the State to adopt all feasible control measures, but the 2020 MSS falls short through 2031.** CCEEB is concerned that a false dichotomy premised on so-called “zero” and “near-zero” distinctions has led CARB down a suboptimal pathway to 2040 that leaves significant health protective emission reductions on the table, especially during the first decade of implementation. We believe this needlessly oversimplifies California’s options yet does not reflect real world conditions, implementation timeframes, or the “win-win” potential of a more sophisticated – yet more practical – multi-technology approach that seeks to turnover as many vehicles as possible, as soon as possible, to the cleanest technologies available. At least two highly credible modeling teams<sup>3</sup> have shown that a multi-technology approach delivers greater “near-term” results while still able to achieve CARB’s 2045 carbon neutrality and 2050 greenhouse gas (GHG) targets. Moreover, a mix of fuels and technologies—the “all options” approach—will be needed through 2040 and beyond, as shown even by MSS modeling. CARB should account for this multi-technology reality in its rules and policies. A simple mandate for zero at the tailpipe doesn’t translate into a simple path forward for heavy-duty transportation.

More importantly, CARB has a mandate under the federal Clean Air Act to implement all reasonable control measures and to protect public health “as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards.”<sup>4</sup> This is most critical for the South Coast and San Joaquin Valley air basins, which are in extreme nonattainment for the 8-hour ozone standard, with the Valley additionally in nonattainment for the annual PM<sub>2.5</sub> standard. CCEEB notes that both districts have expressed concerns about the lack of progress being made on near-term reductions and the apparent shift in CARB priorities since its 2016 SIP for ozone and PM<sub>2.5</sub> and 2018 San Joaquin Valley Supplement for PM<sub>2.5</sub>.<sup>56</sup>

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<sup>3</sup> See Arun S.K. Raju, Barry R. Wallerstein, Kent C. Johnson, “Achieving NO<sub>x</sub> and Greenhouse gas emissions goals in California’s Heavy-Duty transportation sector,” *Transportation Research Part D: Transport and Environment*, Volume 97, 2021, 102881, ISSN 1361-9209, <https://doi.org/10.1016/j.trd.2021.102881>. See also the Ramboll US Consulting, Inc. report, “Multi-technology Pathways to Achieve California’s Air Quality and Greenhouse Gas Goals: Heavy-Heavy-Duty Truck Case Study,” February 1, 2021, prepared for the Western States Petroleum Association, <https://www.wsapa.org/wp-content/uploads/Multi-technology-Truck-Emission-Reduction-Scenarios-White-Paper-FINAL.pdf#page=1>.

<sup>4</sup> United States Code, Title 42, Chapter 85, Subchapter I, Part D, subpart 1, Section 7502(c)(1). See <https://www.govinfo.gov/content/pkg/USCODE-2013-title42/html/USCODE-2013-title42-chap85-subchapl-partD-subpart1-sec7502.htm>.

<sup>5</sup> In a letter to CARB staff, dated October 21, 2020, SJVAPCD staff wrote: “District staff are concerned that the draft 2020 MSS does not sufficiently address the near-term emission reductions necessary to achieve attainment of federal health-based air quality standards in the San Joaquin Valley, as committed to by CARB in the federally-approved San Joaquin Valley SIP and 2018 Supplement.” [https://ww2.arb.ca.gov/sites/default/files/2020-11/SJVAPCD\\_Comment-WorkshopDiscussionDraft2020MSS.pdf#page=2](https://ww2.arb.ca.gov/sites/default/files/2020-11/SJVAPCD_Comment-WorkshopDiscussionDraft2020MSS.pdf#page=2)

<sup>6</sup> In a letter to CARB staff, dated October 20, 2020, SCAQMD staff wrote: “The lack of discussion of the 2023 8-hour ozone attainment date in the South Coast Air Basin in the draft Mobile Source Strategy is very disturbing and likely

CCEEB urges air board members to evaluate the health benefits that could be achieved in these regions over the next decade through a more nuanced approach, keeping in mind that California need not sacrifice progress towards climate and carbon neutrality goals as it pursues attainment of criteria pollutant health standards. At a minimum, CCEEB asks CARB to evaluate emissions reductions in 2031 and 2037 from its Advanced Clean Fleets rule, along with possible reductions from other, multi-technology options, as part of its CEQA alternatives analysis.

**Climate solutions must keep an eye on the “prize,” which is replication and linkage.** Hitting ZEV targets set forth by Governor Newsom are both doable and commendable, in CCEEB’s view, but neither CARB nor the public should mistake this as a panacea to the global climate problem confronting us. No amount of resolve or sacrifice will be enough if California cannot inspire, lead, and promulgate policies that will be replicated in other jurisdictions. This means crafting policies that succeed and are supportable by end users and residents. CCEEB does not want to see CARB or the State fail in its zero-emission rules and plans, as has happened before. CARB policies at this point are “too big to fail.” Getting the details right matters as much for the environment and as it does for the economy. This is why CCEEB emphasizes the need for technically sound feasibility and cost analyses, as these are benchmarks for what might be most readily replicated and adopted in other jurisdictions.

Sincerely,



Janet Whittick  
CCEEB Vice President

cc: Mr. Bill Quinn, CCEEB President  
Ms. Kendra Daijogo, The Gualco Group, Inc. and CCEEB Air Project Manager  
Members of the CCEEB Air Project

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unlawful. The attainment deadline is rapidly approaching and needs a coordinated, massive effort by all levels of government to address. In particular, CARB is required by law to adopt rules and regulations and other measures that in conjunction with measures by the districts and the U.S. EPA will achieve the federal ambient air quality standards by the applicable dates. Health & Safety Code Section 39602.5(a). Failing to address the 2023 standard violates this mandate as well as the requirements of SB44.” SCAQMD also wrote: “Significant levels of NOx reductions from mobile sources are also needed to attain the 2008 8-hour ozone standard (75 ppb) and the 2015 8-hour ozone standard (70 ppb) by 2031 and 2037, respectively, in the Basin.... based on our preliminary review of the draft 2020 MSS, it appears that the total projected reductions from all scenarios for all mobile source categories will not be adequate for 2031 attainment.” [https://ww2.arb.ca.gov/sites/default/files/2020-11/SouthCoastAQMD\\_Comment-WorkshopDiscussionDraft2020MSS.pdf#page=2](https://ww2.arb.ca.gov/sites/default/files/2020-11/SouthCoastAQMD_Comment-WorkshopDiscussionDraft2020MSS.pdf#page=2)



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October 21, 2020

Mr. Sam Pournazeri  
Branch Chief, Mobile Source Analysis Branch  
Air Resources Board  
Submitted Electronically to [sam.pournazeri@arb.ca.gov](mailto:sam.pournazeri@arb.ca.gov)

RE: 2020 Mobile Source Strategy (MSS) Discussion Draft

Dear Mr. Pournazeri,

On behalf of the members of the California Council for Environmental and Economic Balance (CCEEB), we provide these comments on the Air Resources Board (ARB) discussion draft document *2020 Mobile Source Strategy* (2020 MSS). Our comments are focused on the process by which the 2020 MSS has been developed, and we hope our recommendations can assist the ARB in furthering its analytic work in support of critical air quality and climate planning needed to meet the state's goals.

Our main concern is that the ARB appears to be splitting the MSS into two distinct and procedurally different pieces of analyses – the current 2020 MSS, which focuses a single top-down scenario on long-term “reach” goals for climate change, and what we presume will be a subsequent 2021 MSS, which would look at what could actually be done using cost-effective and technologically feasible measures aligned with attainment plans and assessments of advanced technology commercialization rates.

The reason for our concern is multifold. First, we do not believe this approach satisfies the simple language or legislative intent of SB 44. Second, we believe that the 2020 MSS could be misleading to decision makers at ARB and in the Legislature if it lacks the underpinning of feasibility and commercialization analyses. That is, a scenario based on what staff hopes could happen in some perfect economic future is by itself inadequate and incomplete for planning purposes. Third, the rush to completion means that several important strategies have been omitted from the single-scenario view put forward in the 2020 MSS, providing a less than “comprehensive” vision of how California could meet its air quality and climate goals. Fourth, we believe more flexibility is needed in the scenario development in terms of technology mixes available to meet state goals. A single scenario based almost wholly on the market penetration of battery electric vehicles is too narrow to envision technology pathways likely to be available by 2030 and 2050. Indeed, an overly prescriptive strategy today could have the unintended

consequence of stifling research and investment in other technology pathways that will also be needed in the mid- and long-term planning horizons.

**Our overall recommendation is to re-integrate planning efforts into a single process, using the current work as a starting point.** Ideally, ARB would take its goal-based scenario and compare it to a comprehensive strategy that includes measures with analysis of feasibility and market penetration factors. Such a comparison could then inform what mix of options best achieves the maximum emissions reductions at different milestones, as well as what research and investment is needed to close the emissions gaps between the aspirational goal-based scenario and the comprehensive strategy. Moving forward, we ask ARB to commit to an extended public process in order to develop a comprehensive 2021 MSS.

SB 44 amended the Health and Safety Code (H&SC) to provide clear direction for the MSS 2020 update. We cite specific sections to help frame and explain our concerns. We also offer recommendations about how the strategy and public process could be improved to meet statutory requirements and address shortcomings in the discussion draft. [*Emphasis* added below.]

#### **H&SC Section (§) 43024.2(a)(1)**

ARB “shall *update the state board’s 2016 mobile source strategy* to include a *comprehensive strategy* for the deployment of medium duty and heavy-duty vehicles...for the purpose of bringing the state into compliance with federal ambient air quality standards and reducing motor vehicle greenhouse gas emissions...”

The current MSS 2020 seems to be a standalone plan, and not one that builds off the 2016 MSS. This means it is missing significant statewide measures from the 2016 MSS that have not been fully implemented and may be failed policies, if further ignored. For example, the 2016 MSS included statewide measures for “further deployment of clean technologies” for on-road and off-road sources. Together, these measures were to achieve 64 tons per day (tpd) of NO<sub>x</sub> emission reductions by 2031, or about 61 percent of new NO<sub>x</sub> reductions identified in the 2016 MSS. For medium- and heavy-duty vehicles, the 2016 MSS envisioned having 100,000 to 150,000 trucks meet or exceed the optional low-NO<sub>x</sub> standard of 0.02 g/bhp-hr by 2023. However, these “further deployment” measures do not appear to have been included in either the MSS 2020 emissions baseline or as part of the proposed or alternative scenarios.

Similarly, in 2018, ARB adopted a San Joaquin Valley supplement to the 2016 State Implementation Plan (SIP), which calls for the turnover of approximately 33,000 heavy-duty vehicles to the optional low-NO<sub>x</sub> standard, which would achieve eight tpd of NO<sub>x</sub> reductions by 2024. This, too, appears to have been omitted from the 2020 MSS.

In short, Table 1 of the 2020 MSS misses many of the core measures from the 2016 MSS and SIP, and does not show what progress has been made (or what gaps remain) towards “completing” the 2016 measures. If ARB intends to shelve the 2016 strategy and start afresh with its 2020/2021 plan, then this calls into question the state’s SIP commitments, which incorporate the 2016 MSS measures.

ARB shall update the 2016 MSS “in consultation with the Department of Transportation [Caltrans], the State Energy Resources Conservation and Development Commission [CEC], and the Governor’s Office of Business and Economic Development [GO-Biz] and in collaboration with relevant stakeholders...”

The discussion draft 2020 MSS does not address what consultation was provided by outside agencies. CCEEB does not believe that simply citing Caltrans, CEC, or GO-Biz documents meets the intention of consultation set forth in SB 44.

ARB shall “recommend *reasonable and achievable goals* for reducing emissions from medium- and heavy-duty vehicles by 2030 and 2050...”

No analysis in the 2020 MSS has been made to test whether scenario targets would be “reasonable and achievable.” Instead, staff took reach goals from various executive orders as the starting point, but never actually assessed whether these goals could be achieved in practice. CCEEB notes that, in general, executive order (EO) goals do not carry the same weight as those passed by the Legislature and chaptered into state code. For example, EO B-48-18 called for five million electric and plug-in hybrid vehicles by 2030, yet, as the 2020 MSS points out, only half of that goal will be met.

The comprehensive strategy shall be based on factors including “*technological feasibility*” and “*cost-effectiveness*.”

ARB staff has stated that neither technological feasibility nor cost effectiveness will be considered in the 2020 MSS update. Instead, staff has indicated this work will be done through future rulemaking and planning processes. This is perhaps our biggest sticking point and why we question the ultimate utility of the 2020 MSS – a strategy not grounded in reality can do little on its own to inform decision makers who must decide how state goals can best be met.

### **H&SC § 43024.2(a)(2)(A) and (B)**

Analysis of “policies that provide *adequate advantage to fleets* that reduce [GHG] emissions earlier than required by law”

Because no measures are included in the 2020 MSS, the plan fails to describe any specific policy or suite of policies that provide advantages to early adopters. Moreover,

ARB staff at recent public meetings has called into question whether the agency supports continued incentives for heavy-duty vehicles beyond 2024, as sales targets for zero-emission trucks begin to be implemented under the Advanced Clean Trucks rule.

*“Coordination of plans for the attainment of federal ambient air quality standards with relevant [GHG] emissions reduction goals”*

As we described above, the 2020 MSS does little to build off the 2016 MSS or SIP. As such, there seems to have been insufficient coordination between the South Coast and San Joaquin Valley attainment plans and the 2020 MSS.

#### **H&SC § 43024.2(b)(1) to (6)**

*In developing the strategy, ARB shall “[s]eek to **maximize the reduction of criteria pollutants.**”*

Both the proposed scenario and the alternative scenario result in similar NO<sub>x</sub> reductions. However, CCEEB assumes that accelerating near-term turnover of medium- and heavy-duty vehicles that meet the 0.02 g/bhp-hr standard would achieve greater NO<sub>x</sub> reductions at least through 2030 (and would be more consistent with the 2016 MSS and SIP) yet this alternative pathway does not appear to have been included in the scenarios.

*ARB shall “identify regulation that could improve market acceptance, **spur technology advancements, reduce technology costs,** and support the commercialization and deployment of medium duty and heavy-duty vehicles that reduce emissions of [GHGs]”*

Nothing in the 2020 MSS addresses support for commercialization, even for the preferred scenario based on battery electric vehicle (BEV) penetration. In addition to BEVs, a *comprehensive* analysis should be done to determine what support is needed for commercialization of ultra low-NO<sub>x</sub> engines, fuel cell electric vehicles, low-carbon and renewable fuels, and other advanced technologies that can reduce criteria and greenhouse gas emissions from mobile sources. Here, our concern is not merely satisfying SB 44 requirements; a “one-size-fits-all” scenario based only on BEV penetration could send unintended market signals that chill investment in other needed areas. Moreover, it fails to account for the significant market shift California is already experiencing. For example, two of the Bay Area’s five refineries have announced plans to shift to 100 percent renewable fuels, yet the impact of this major change to refining capacity has not been addressed in the 2020 MSS.

*ARB shall “[i]dentify research needs to address any data gaps.”*

The 2020 MSS fails to address research needs at all.



ARB shall “identify benefits to low-income communities and communities disproportionately impacted by diesel pollution.”

CCEEB does not believe that referencing AB 1550 and AB 617 in general terms is sufficient analysis of the differing level of benefits possible under various strategy and scenario options available to ARB. A key focus should be assessment of which measures can maximize criteria pollutant reductions as soon as possible in impacted communities.

ARB shall “identify policies that provide *advantages to fleets* that reduce [GHG] emissions early.”

This topic was covered previously in our comments.

### **Other Legal Requirements that May Apply to the MSS 2020/2021**

Unlike the current work, the 2016 MSS included an assessment of the economic benefits and costs of the plan, as well as descriptions of proposed statewide and regional emissions reduction measures, including measures related to renewable and low-emission fuels. As the 2016 MSS was incorporated in the South Coast and San Joaquin Valley attainment plans, further analysis was done on technological feasibility, cost effectiveness, and environmental impacts, as required by the California Environmental Quality Act (CEQA). These analyses were included as the 2016 MSS was incorporated into the 2016 SIP. The 2020 MSS, on the other hand, appears disconnected from regional attainment plans and the statewide SIP, and no similar impact analyses have been done, despite the SB 44 requirements cited above. As ARB moves into formal planning and rulemaking processes meant to flesh out the 2020 MSS, there is a strong likelihood that the required impact analyses could fundamentally alter ARB’s proposed scenario and challenge the validity of its core assumptions. Again, CCEEB strongly recommends that the process be re-integrated so that planning scenarios are based on appropriate technological feasibility, economic impact, and environmental analyses, which ARB will eventually need to conduct to meet CEQA and Administrative Procedure Act requirements.

In many ways, the 2020 MSS is more consistent with the Vision Tool, which was first released in 2012 to prompt discussions in support of the 2016 MSS development. ARB subsequently updated the Vision Tool in 2014 and 2016, based on public input. In between 2012 and 2016, ARB and its partner air districts in the South Coast and San Joaquin Valley held numerous public workshops and working group meetings to vet the Vision Tool and the 2016 MSS, and to refine ARB modeling and planning strategies. In comparison, ARB has held only two public workshops (March and October) on the 2020 MSS, with a beta version of the underlying Mobile Emissions Toolkit Analysis released in August. This short window for public input – basically amounting to four months instead of four years – was made even more challenging by work-from-home orders and the shift to online meetings at ARB, which are often over-subscribed and hard for individuals



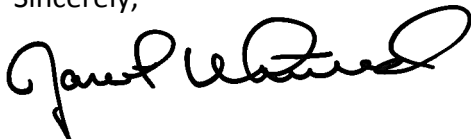
to engage with staff in meaningful and deliberative ways. While CCEEB understands the desire to meet the January 1, 2021 deadline to report to the Legislature, we do not believe that timeliness should come at a sacrifice to the quality of ARB's work or the adequacy of its public participation process. If more time is needed, more time should be taken.

### **A Note on COVID-19 Impacts**

The 2020 MSS rightfully acknowledges the severe impact that the COVID-19 pandemic has had on the State budget, as well as risks to individuals suffering from existing respiratory illnesses. However, it fails to mention the economic impact to California businesses and families, who ultimately bear the costs of accelerated turnover to BEVs and zero-emission equipment, as well as the associated and significant costs of revamping the state's transportation and energy systems to support electric vehicle charging and fueling. For the purposes of the MSS 2020, CCEEB believes these missing economic factors will play a bigger role in assessing the plan's feasibility than the State budget, and as such, should be addressed. We also ask ARB to be mindful of the economic pain Californians are feeling at this time, and acknowledge the numerous challenges businesses are facing in terms of capital and resource constraints, including significant job losses, as the economy struggles to recover.

We appreciate the opportunity to comment. Should you have questions about our comments or wish to discuss anything in greater detail, please contact me at [janetw@cceeb.org](mailto:janetw@cceeb.org) or (415) 512-7890 ext. 111.

Sincerely,



Janet Whittick  
CCEEB Policy Director

cc: David Edwards, ARB  
Michael Benjamin, ARB  
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Senator Nancy Skinner  
Senator Jim Beall, Senate Committee on Transportation  
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