**COMMENTS ON CARB’s PROPOSED ADOPTION OF THE OZONE IMPLEMENTATION PLANS FOR SOUTH COAST AQMD AND SAN JOAQUIN VALLEY AIR DISTRICT**

Submitted on behalf of Elders Climate Action by Robert Yuhnke, Peggy Lobnitz, Richard Burke and Pete Marsh

January 17, 2023

The draft Ozone State Implementation Plans (SIPs) for the South Coast Air Quality Management District and the San Joaquin Valley Air District presented to the Board for adoption do not contain sufficient adopted control measures to provide for the NOx emission reductions determined to be necessary for attainment of the Ozone National Ambient Air Quality Standard (NAAQS). Elders Climate Action asks the Board to adopt additional or more stringent measures that will accelerate the reductions in NOx emissions needed for attainment.

To address this deficiency in enforceable measures, Elders Climate Action asked CARB in comments submitted on June 9, 2022,[[1]](#footnote-1) to strengthen the proposed Advanced Clean Cars II (ACC II) regulation to increase the reductions in NOx emissions needed for attainment by –

1) advancing the deadline for 100% sale of Light Duty (LD) zero emission vehicles (ZEVs) from 2035 to 2030; and

2) establishing limitations on the operation of internal combustion engine vehicles (ICEVs) that progressively reduce the vehicle miles traveled by ICEVs to zero no later than 2035 in ozone nonattainment areas designated “severe” and “extreme” under the Clean Air Act (CAA).

CARB adopted a final Advanced Clean Cars II rule, but did not advance the deadline for the sale of LD ZEVs.

CARB has begun development of a Clean Fleets rule that will, if adopted, require that fleet operators with more than 50 medium and/or heavy duty (M/HD) internal combustion (IC) vehicles follow a schedule for replacing those vehicles no later than a deadline to be determined. The draft rule released for comment would require that covered fleet vehicles be replaced no later than 2042. The public is invited to comment on the option of setting 2036 as the deadline for replacement.

Elders Climate Action (ECA) renews its request that CARB develop a rule establishing limitations on the operation of internal combustion engine vehicles (ICEVs) that progressively reduce the vehicle miles traveled by ICEVs to zero no later than 2035 in ozone nonattainment areas designated “severe” and “extreme” under the Clean Air Act (CAA). ECA contends that the CAA mandates that the operation of IC vehicles be phased out as a control strategy in areas where motor vehicle emissions contribute to nonattainment, and where other control measures are not sufficient to provide for attainment. We ask that the strategy reflected in the Clean Fleets rule be expanded gradually from fleets that operate 50 or more M/HD vehicles to smaller fleets with 5 M/DH vehicles.

In addition, we ask that LD IC vehicles be banned from operating within the South Coast and San Joaquin Valley nonattainment areas no later than 2037. If vehicle owners are given notice in 2023 that they will not be allowed to operate an IC vehicle after 2037 during ozone season (March to November), they will have ample opportunity to replace those vehicles with a certified ZEV.

ECA believes that the CAA requires control measures in the SIP, and commitments to adopt additional control measures such as the Clean Fleets rule, must be adopted and implemented to achieve emission reductions before the statutory deadline for attainment, to wit, 2037 for South Coast and San Joaquin Valley. Therefore both the Clean Fleets rule and a ban on the operation of IC vehicles must contain deadlines to achieve emission reductions no later than 2037.

**Standing.**

These requested revisions to the currently proposed Ozone SIPs are submitted on behalf of Elders Climate Action (ECA), the ECA Northern California and Southern California Chapters, and ECA members who reside, work and recreate in ozone and particulate matter (PM) non-attainment areas.

ECA, its chapters and members have a stake in this decision both because we are –

A) the elders of families whose health and well-being are personally affected by exposure to the hazardous air pollution conditions that cause premature death and other severe adverse impacts on health among residents in the counties where the NAAQS for ozone and/or PM2.5 are violated, and

B) the parents and grandparents of children who will be compelled to live their lives in the extreme conditions that are now occurring and will worsen as a result of the climate heating caused by the GHG pollutants emitted from combustion of carbon fuels in motor vehicles.

**I. CLEAN AIR ACT AUTHORITY FOR LIMITING THE OPERATION OF ICEVs.**

The Clean Air Act (“CAA”) requires that California adopt a State implementation plan (SIP) with a “control strategy” designed to ensure that areas currently not in attainment of a NAAQS reduce emissions to levels that will not violate national air quality standards. CAA, Part D, Plan Requirements for Nonattainment Areas, 42 U.S.C. section 7501 *et seq*.

California has the most polluted ozone nonattainment areas in the Nation, with the South Coast Air Quality Management District reporting over 400 days with ozone concentrations greater than the National Ambient Air Quality Standard (70 ppb) [NAAQS] during the last triennial reporting period, and the San Joaquin Valley reporting more than 300 exceedances of the standard. To attain the NAAQS, California is developing additional control measures for adoption as part of its ozone State Implementation Plan.

The CAA requires that each State shall adopt a State implementation plan (SIP) that contains enforceable control measures to achieve the emission reductions needed to attain the ozone NAAQS. 42 U.S.C. §§ 7410, 7502, 7511, 7511a. EPA’s implementing regulations require that the SIP include a “control strategy” that designates the control measures sufficient to achieve the reductions needed for attainment:

51 C.F.R. § 112 (control strategy in an implementation plan must be “adequate to provide for the timely attainment and maintenance of the national standard that it implements.”).

51 C.F.R. § 100(n) “Control strategy means a combination of measures designated to achieve the aggregate reduction of emissions necessary for attainment and maintenance of national standards including, but not limited to, measures such as:

(7) Any transportation control measure including those transportation measures listed in section 108(f) of the Clean Air Act as amended.”

In addition to these general provisions, the Act includes additional requirements for the control of emissions from transportation sources in ozone nonattainment areas designated as “serious,” “severe,” or “extreme.” South Coast and San Joaquin Valley are both “extreme” ozone nonattainment areas.

For “serious” areas, the Act requires that where “aggregate vehicle emissions”… “exceed the levels projected for purposes of the area’s attainment demonstration, the State shall within 18 months develop and submit a revision of the applicable implementation plan that includes a transportation control measures program consisting of measures from, but not limited to, section 7408(f) of this title that will reduce emissions to levels that are consistent with emission levels projected in such demonstration.” 42 U.S.C. §7511a(c)(5).

For “severe” areas, in addition to the requirements for “serious” areas, the Act requires that “the State shall submit a [SIP] revision that identifies and adopts specific enforceable transportation control measures to offset and growth in emissions from growth in vehicle miles travelled or numbers of vehicle trips in such area and to attain reduction in motor vehicle emissions as necessary, in combination with other emission reduction requirements of this subpart, to comply with the requirements of subsection (b)(2)(B) and (c)(2)(B) of this section (pertaining to periodic emission reduction requirements). The State shall consider measures specified in section 7408(f) of this title, and choose from among and implement such measures as necessary to demonstrate attainment with the national ambient air quality standards….” 42 U.S.C. §7511a(d)(1)(A).

The 1990 Amendments also revised and expanded the 1977 list “of *transportation control measures* related to criteria pollutants and their precursors….” 42 U.S.C. § 7408(f) [emphasis added]. Among the new control measures, Congress added “(vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use.”

These provisions of the CAA provide authority to limit emissions from the use and operations of vehicles, and requires states to use that authority to “implement such measures as necessary to demonstrate attainment with the national ambient air quality standards….” When other control measures are not sufficient to provide for attainment, the Act provides both authority and a duty to limit the operation of motor vehicles that contribute to nonattainment to remedy existing violations of a NAAQS caused by emissions from motor vehicles.

To implement the mandate of the CAA to attain NAAQS in areas where emissions from vehicles cause or contribute to violations of NAAQS, the Act provides states with explicit authority to reduce motor vehicle emissions through 1) adoption of specific “transportation control measures” included in the State’s control strategy; 2) an Indirect Source Review program adopted in a SIP; 3) establishing motor vehicle emission budgets to govern the design of regional transportation plans and programs, and/or 4) requiring project-specific mitigation measures sufficient to assure that emissions from a highway project will not cause or contribute to a local violation of a NAAQS.

1. General Authority, and Requirements in “serious” and “severe” areas, to Adopt “Transportation Control Measures” that Reduce Vehicle Emissions.

The ozone SIP requirements enacted in 1990 are intended to provide statutory tools and requirements aimed at reducing aggregate emissions from motor vehicles on a regional scale. In both sections added by the 1990 CAA Amendments, *supra,* Congress explicitly directed the States to consider and implement “transportation control measures” contained in §108(f), 42 U.S.C §7408(f), “that will reduce emissions to levels that are consistent with emission levels projected in such [attainment] demonstration,” §7511a(c)(5) and “implement such measures as necessary to demonstrate attainment with the national ambient air quality standards….” §7511a(d)(1)(A).

When Congress added “programs to limit or restrict vehicle use” to the list of transportation control measures in § 7408(f), this statutory list had long been interpreted by EPA as providing authorization for the states to adopt the statutory measures as “transportation control measures” in a control strategy “necessary for attainment and maintenance of national standards.” 51 C.F.R. § 100(n). EPA’s Part 51 rules describing what states must include in a SIP date back to 1971 when they were promulgated to implement the CAA SIP requirement first enacted in 1970. EPA’s rule requires states to submit a “control strategy” that is “adequate to provide for the timely attainment and maintenance of the national standard that it implements.” 51 C.F.R. § 112. The rule defines the elements of a control strategy by expressly including, *inter alia*, “[a]ny transportation control measure including those transportation measures listed in section 108(f) of the Clean Air Act as amended.” 51 C.F.R. § 100(n)(7).

 The Agency’s pre-1990 interpretation of the Act requiring that transportation control measures listed in §108(f)(1)(A) must be implemented if necessary for attainment was ratified by Congress when the specific directives in § 7511a(c)(5) and (d)(1)(A) were enacted to require adoption of transportation control measures listed in §108(f) if necessary to attain the NAAQS.

Thus when Congress added the new “transportation control measures” to § 108(f)(1)(A) in 1990, Congress authorized the States to implement a NAAQS by adopting a control strategy that includes, among other measures, limitations or restrictions on vehicle access to “downtown areas or other areas of emission concentration.” If necessary for attainment, the statutory directives in § 7511a(c)(5) and (d)(1)(A) create the obligation to adopt control measures to limit or restrict vehicle use.

This language provides broad discretion for States to determine the scope of such limitations, but the guiding principle is that such limitations must be sufficient to provide for attainment when other control measures such as vehicle emission standards are not sufficient to attain. The scope of such measures could be limited to heavily trafficked highways, ports or airports if NAAQS violations are limited to hot spots affected by motor vehicle emissions, or apply to an entire nonattainment area where vehicle emission are great enough to cause NAAQS violations.

This transportation control measure requiring limitations or restrictions on vehicle use calls on States and local authorities to exercise the authority to restrict vehicle access that CAA § 209(d) expressly preserves.

Nothing in this part shall preclude or deny to any State or political subdivision thereof the right otherwise to control, regulate or restrict the use, operation or movement of any registered or licensed motor vehicle.

42 U.S.C. § 7543(d). This statutory declaration of the police powers reserved to the States recognizes that States and their political subdivisions have inherent authority to limit or restrict the operation of vehicles, and that any pre-emption of State authority to set emission standards for new motor vehicles by section 209(a), or that might be implied by other provisions of the Act, is not intended to limit that authority.

The statutory language added to § 108(f) authorizing States to adopt TCMs that “limit or restrict vehicle use [in] areas of emission concentration” is similar in its broad reach to the grant of authority to a State to implement an Indirect Source Review (ISR) program. The effect of the 1990 amendment listing a TCMs that limit or restrict vehicle use was to give the States authority to limit vehicle access beyond the impact of an individual project within the narrow scope of an ISR program. Congress in 1990 recognized the need to adopt TCMs in the SIP that are designed to ensure that a NAAQS is attained or maintained at scales beyond specific locations where concentrations of mobile sources attracted by a specific project threaten localized violations of a NAAQS. In 1990, the additional authority added to § 108(f) broadened the ISR authority enacted in 1977 to reduce emissions from “federally assisted highways.” Congress expanded to all “areas of emission concentration” the regulatory tools previously available to States for limiting mobile source emissions from specific projects such as highways, airports and ports.

The terms Congress chose to define the authority in § 108(f)(1)(A)(vii) to “limit or restrict vehicle use” broadly encompasses all situations where concentrations of vehicle emissions cause or contribute to violations of a NAAQS. None of these terms imply limitations on the inherent State authority recognized in § 209(d) to limit or restrict vehicle access to such locations. Congress acted to avoid the implication that authority to adopt ISR programs to protect air quality for residents living near highways or ports had the effect of denying such protections for communities affected by dangerous levels of ozone experienced by communities miles away from the indirect sources where vehicles are operated.

Had Congress intended to limit regulatory measures to controlling emissions from individual projects such as interstate highways, it could have left the pre-1990 regulatory regime unchanged. But it chose to extend the protections of the Act to ozone nonattainment areas downwind from motor vehicle source hot spots by adding tools to allow states to ensure those areas would not be excluded from the general statutory goal of attaining the NAAQS wherever it might be violated as a result of emissions from motor vehicles.

By adding a TCM that empowers states to limit or restrict vehicle access for the purpose of reducing emissions to attain the NAAQS, Congress necessarily granted authority for states to recognize the distinction between vehicles that emit pollution and those that do not. In fact, Congress specifically cautioned that “the State should ensure adequate access to downtown, other commercial and residential areas and should avoid measures that increase or relocate emissions and congestion rather than reduce them.” 42 U.S.C. § 7511a(d)(1)(A).

These potentially competing commands to limit or restrict access when needed to attain a NAAQS, but “ensure adequate access to downtown, other commercial and residential areas,” points to control measures that allow clean vehicles to provide mobility, such as electrified rail and trollies, or zero emission transit buses and passenger vehicles, while restricting the operation of polluting vehicles. The now ubiquitous availability of zero emission electric vehicles offers a control measure that can satisfy both congressional objectives. The new TCM enacted in 1990 provides clear authority for limiting the use of ICEVs when necessary to attain the NAAQS while allowing access by zero emission vehicles (ZEVs).

Accordingly, ECA asks that CARB implement this authority to limit the use and operation of ICEVs in the extreme ozone nonattainment areas where CARB has failed to identify and adopt other strategies that are sufficient to attain the NAAQS.

**2. Indirect Source Review Programs.**

CAA section 110(a)(5) enacted in 1977 authorizes the regulation of “indirect source[s]” by the States. The Act defines an “indirect source” as “a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution,” excluding any “[d]irect emissions sources or facilities at, within, or associated with any indirect source.” 42 U.S.C. 7410(a)(5)(C). “Mobile source” includes “motor vehicles” and “nonroad vehicles.” 51 C.F.R. Part 50.

“Highways, airports and other major federally assisted indirect sources” expressly fall within this statutory definition of “indirect source,” and, a separate provision of section 110(a)(5) confirms that the Act contemplates *federally assisted* highways and airports as indirect sources subject to review. *Id.* at 7410(a)(5)(B) (providing that the Administrator, in addition to states, may promulgate indirect source review programs applicable to “federally assisted highways [and] airports”).

With respect to regulating indirect sources, the Act expressly provides that “[a]ny state may include in a State implementation plan . . . any indirect source review program.” *Id* at 7410(a)(5)(A)(i) (noting that the Administrator may not require such plans as a condition of SIP approval); *see also id.* at 7410(a)(5)(A)(ii) (prohibiting, with the exception of the federal facilities described above, the Administrator from promulgating indirect source review programs).

The Act defines an indirect source review program as follows:

**(D)** For purposes of this paragraph the term “indirect source review program” means the facility-by-facility review of indirect sources of air pollution, including *such measures as are necessary to assure, or assist in assuring, that a new or modified indirect source will not attract mobile sources of air pollution*, the emissions from which would cause or contribute to air pollution concentrations—

**(i)** exceeding *any* national primary ambient air quality standard for a mobile source-related air pollutant after the primary standard attainment date, or

**(ii)** preventing maintenance of any such standard after such date.

42 U.S.C. 7410(a)(5)(D)(emphasis added).

A 9th Circuit decision finds that states have broad discretion to address indirect sources in their SIPs. *See National Ass’n of Home Builders v. San Jaoquin Valley Unified Air Pollution Control Dist.*, 627 F.3d 730 (9th Cir. 2009) (approving an ISR program regulating construction sites and equipment). The court further held that the ISR program at issue, which indirectly limited emissions from non-road vehicles, was not preempted by section 209 of the Act. *Id.* at 738 (“In light of the underlying purpose of section 110(a)(5) - to return power to states and localities - it would be surprising if the Act nevertheless preempted a local rule that qualified as an indirect source review program under section 110(a)(5).”); *see also Sierra Club v. Larson*, 2 F.3d 462, 468 (1st Cir. 1993) (concluding indirect source review “is left largely to the states.”).

Given that the Act expressly defines all “federally assisted highways,” without limitation as “indirect source[s],” and allows states to adopt indirect source review programs that include “such measures as are necessary to assure, or assist in assuring, that a new or modified indirect source will not attract mobile sources of air pollution, the emissions from which would cause or contribute to air pollution concentrations” exceeding a NAAQS or preventing maintenance of such standard, the Act recognizes broad State authority to limit emissions from highway projects and other facilities that attract mobile sources, including ports, airports, rail yards and intermodal terminals.

The language “such measures as are necessary” broadly encompasses actions that limit the extent to which a highway or other indirect source attracts mobile sources, like limiting traffic volumes, denying access to the most polluting vehicles, requiring rerouting of polluting mobile sources to highways where air quality violations would not be expected, or allowing access only to zero emission or low emission vehicles that do not emit pollutants that might cause or contribute to NAAQS violations.

However, as the Ninth Circuit noted in *San Joaquin Valley,* an indirect source program is limited to the review of emissions from individual projects on a case-by-case basis. It is not designed to address regional emissions from motor vehicles that contribute to ozone formation across an entire nonattainment area.

**3. Transportation Conformity Establishes Independent Authority for a SIP to Require Implementation of IC Vehicle “No Travel Zones” Through Transportation Plans, Programs and Projects.**

Under the CAA conformity requirements, regional transportation plans, transportation improvement programs (TIPs), and federally funded transportation projects must *conform* with SIPs. 42 U.S.C. § 7506(c)(1). The Act prevents metropolitan planning organizations and State transportation agencies from adopting or approving any transportation plan that does not conform to a SIP, and prohibits U.S. DOT from funding projects that fail to conform to a SIP.

The Act defines “conformity” as:

(A) conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and

(B) that such activities [i.e., transportation plans, programs and projects] will not--

(i) cause or contribute to *any* new violation of any standard in *any* area;

(ii) increase the frequency or severity of any existing violation of *any* standard in *any* area; or

(iii) delay timely attainment of *any* standard or any required interim emission reductions or other milestones in *any* area.

42 U.S.C. 7506(c)(1).

In addition, the Federal-Aid Highway Act, 23 U.S.C. §109(j), requires –

 … that highways constructed pursuant to this title are consistent with any approved plan for— (1) the implementation of a national ambient air quality standard for each pollutant for which an area is designated as a nonattainment area under section 107(d) of the Clean Air Act (42 U.S.C. 7407(d)); or (2) the maintenance of a national ambient air quality standard in an area that was designated as a nonattainment area but that was later redesignated by the Administrator as an attainment area for the standard and that is required to develop a maintenance plan under section 175A of the Clean Air Act (42 U.S.C.7505a).

Together, the conformity provisions of the CAA and the Highway Act require that agencies responsible for planning, funding, constructing and operating the transportation system implement the transportation control measures adopted in a SIP.

EPA’s regulation implementing transportation conformity specifically requires the Federal Highway Administration to adopt mitigation measures to ensure that emissions from a federally funded highway project will not cause or contribute to new or more severe violations of a NAAQS. *See* 40 C.F.R. § 93.125. Accordingly, if a state were to adopt a regulation to implement an ISR program or a TCM that resulted in requirements to limit or restrict access by polluting ICEVs, the consistency and conformity provisions of the Federal Aid Highway Act and the CAA would require that DOT ensure that federal highways are operated in a manner that reflect these requirements.

**Ii. Estimate Of Potential Nox And Rog Emission Reductions From Restricting IC Vehicles.**

Using CARB’s EMFAC 2021 model, version 1.0.2, potential NOx and ROG emission reductions were estimated for a scenario that bars the operation of LD IC vehicles in SCAQMD and SJVAPCD air sheds after 2035.

The emission reductions were derived by zeroing all NOX and ROG emissions for LDA, LDT1 and LTD2 vehicle categories in the model and calculating the change in emissions.

**Table 1: Emission Reductions Associated with Banning Light Duty ICE vehicles in 2035**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **District** | **NOx (TPD)** | **NOx (TPY)** | **ROG (TPD)** | **ROG (TPY)** |
| SCAQMD | 19 | 6,475 | 33 | 11,285 |
| SJVAPCD | 5 | 1790 | 9 | 3293 |

In addition we ask CARB to expand the scope of the proposed Clean Fleets (CF) rule to include M/HD vehicles in fleets smaller than 50 vehicles. The Emission inventory posted for the draft CF rule estimates that the program would capture approximately 514,000 thousand of 1.4 million M/HD vehicles in the South Coast AQMD, and would continue to allow 14.7 t/d NOx from M/HD vehicles in the South Coast AQMD.

We were not able to find data showing how many vehicles would be governed by the program if its scope was expanded to include vehicles with as few as 5 vehicles. A rough approximation suggests that NOx emissions reductions from M/HD vehicles could at least be doubled. Ultimately, a ban on the operation of M/HD vehicles after 2037 would eliminate all 14.7 t/d NOx emitted from M/HD vehicles.

Together these two strategies could reduce NOx emissions in South Coast by 33.7 t/d.

ECA also asks CARB to use the CAA authority for Indirect Source Review programs to develop programs to control access by polluting mobile sources (marine vessels and aircraft) for the ports, airports and rail yards in the South Coast and San Joaquin Valley.

When combined with other measures in the Ozone SIP Strategy, these strategies could reduce the remaining gap between 2035 emissions and the reductions needed for ozone attainment. Taking the initiative to develop ISR programs for ports and airports would provide strong incentive for EPA and international bodies to complete new federal rules for ships, locomotives and aircraft. These strategies could provide the reductions needed to demonstrate attainment in South Coast.

**CONCLUSION.**

ECA requests that CARB –

1) undertake an additional rulemaking to develop a strategy based on the authority contained in CAA sections 108(f) and 209(d) to gradually limit the operation of ICEVs until they would be prohibited from operating during ozone season in these extreme nonattainment areas after 2037;

2) expand the scope of the draft Clean Fleets rule to include fleets as small as 5 vehicles; and

3) commence development of Indirect Source Review programs for the ports and air ports to limit access to clean or low emitting vessels and aircraft by 2037.

Respectfully submitted on behalf of Elders Climate Action,

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1. *See* COMMENTS ON CARB’s PROPOSED ADVANCED CLEAN CARS II REGULATION (June 9, 2022), incorporated herein by reference. [↑](#footnote-ref-1)