COMMENTS ON CARB's PROPOSED ADVANCED CLEAN CARS II REGULATION

Submitted on behalf of Elders Climate Action
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Elders Climate Action asks CARB to strengthen the proposed Advanced Clean Cars II (ACC II) regulation to achieve the reductions in NOx emissions needed to attain the national ambient air quality standards (NAAQS) for ozone and particulate matter by –

1) advancing the deadline for 100% sale of zero emission Light Duty vehicles (LDVs) 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).

These revisions to the currently proposed ACC II 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. EXECUTIVE SUMMARY

The proposed ACC II rule must be upgraded to advance the date for 100% sales of zero emission vehicles from 2035 to 2030 because the reductions expected from the rule by 2035 will not be adequate to attain the ozone NAAQS by the 2037 CAA deadline. The draft EA projects that the rule will reduce statewide tailpipe NOx emissions 17 t/d from 95 to 78 t/d, but these reductions are not sufficient to provide for ozone attainment in either the South Coast AQMD or the San Joaquin Valley AQMD.

The proposed Ozone SIP strategy for the South Coast states, at 23, that "air quality modeling indicates NOx emissions will need to decline by approximately 126 tpd from 2037 levels to provide for attainment in the remaining portions of the region that do not yet meet the standard. Reaching these levels will require an approximately 80 percent reduction from

today's levels by 2037." The SIP Strategy does not state the additional reductions needed for the San Joaquin Valley, but significant reductions must be achieved to attain the 70 ppb NAAQS.

Staff estimates that the ACC II rule will achieve nearly double the reductions (30.1 t/d) by 2040 compared to 2035 (17 t/d). These additional statewide NOx reductions expected from full implementation of the rule after 2035 provide an approximation of the reductions that could be achieved by 2035 if full implementation of the rule were advanced to 2030.

The Staff analysis does not provide estimates of the reductions that would be achieved by the ACC II rule in South Coast and San Joaquin Valley Air Districts. ECA performed modeling to estimate the NOx reductions likely to be achieved by advancing implementation of the rule to 2030.

ESTIMATE OF POTENTIAL NOX AND ROG EMISSION REDUCTIONS ASSOCIATED WITH TWO ALTERNATE ACC II SCENARIOS

Using CARB's EMFAC 2021 model, version 1.0.2, potential NOx and ROG emission reductions were estimated for two alternative scenarios. These scenarios are as follows:

1) Moving the compliance date for new passenger vehicles sold in California to be zero emissions from 2035 to 2030; and
2) Banning the operation of light duty internal combustion engine vehicles in SCAQMD and SJVAPCD air sheds by 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 2030 versus 2035 EV Compliance Date

District	NOx (TPD)	NOx (TPY)	ROG (TPD)	ROG (TPY)
SCAQMD	4.86	1,691	4.52	1,577
SJVAPCD	1	423	1	382

Table 2: 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

Together these two strategies could reduce NOx emissions in South Coast by 24 t/d. If paired with similar strategies for heavy duty vehicles, modeling performed by ECA for comments

submitted to EPA asking that EPA adopt the CARB ACT rule for the control of NOx emissions,[1] it appears that total NOx reductions of about 43 t/d could be achieved from vehicles in South Coast. When combined with other measures in the Ozone SIP Strategy, these strategies would reduce the remaining gap between 2035 emissions and the reductions needed for ozone attainment to less than 10 t/d. That shortfall could be eliminated by new federal rules for ships, locomotives and aircraft. These strategies could provide the reductions needed to demonstrate attainment in South Coast.

We therefore request that CARB consider a 2030 alternative to the proposed ACC II rule package, and 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 2035.

II. 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:

[1] ECA shared its comments and modeling analysis submitted to EPA with CARB staff on May 17, 2022. That modeling and the modeling analysis evaluating these two proposed regulatory options will be submitted in the near future for detailed review by CARB staff as part of ECA's comments on the Ozone SIP Strategy.

(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."

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).

These provisions of the CAA provide authority to limit emissions from the use and operations of vehicles, and requires states to use that authority when necessary to remedy existing violations of a NAAQS.

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

1. 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—
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> **(i)** exceeding *any* national primary ambient air quality standard for a mobile source-related air pollutant after the primary standard attainment date, or
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> **(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. The language "such measures as are necessary" broadly encompasses actions that

limit the extent to which a highway attracts mobile sources, like limiting traffic volumes, denying access to the most polluting vehicles by requiring rerouting to highways where air quality violations would not be expected, or allowing access only to zero 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.

2. General Authority, and Requirements in "serious" and "severe" areas, to Adopt "Transportation Control Measures" that Limit Vehicle Operations.

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 7511a(c)(5) and (d)(1)(A) added by the 1990 CAA Amendments, Congress explicitly directed the States to consider and implement transportation control measures contained in §108(f), 42 U.S.C §7408(f).

The 1990 Amendments also revised and expanded the 1977 list of measures enumerated in § 108(f) "regarding the formulation and emission reduction potential 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."

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 such 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).

This pre-1990 Agency interpretation that the transportation control measures listed in §108(f)(1)(A) were to be implemented if necessary for attainment was ratified when Congress enacted the specific directives in § 7511a(c)(5) and (d)(1)(A) to consider and adopt the transportation control measures listed in §108(f) as 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, or apply to an entire nonattainment area where emission concentrations are great enough to cause NAAQS violations.

This transportation control measure requires States and local authorities to exercise the authority to restrict vehicle access that § 209(d) expressly preserves. 42 U.S.C. § 7543(d).

> 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 declaration 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 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 ISR program. The effect of the 1990 amendment adding authorization for such TCMs 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 threaten to 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 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.

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 transit or zero emission passenger vehicles, while restricting the operation of polluting vehicles. The ubiquitous availability of zero emission electric vehicles now 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.

3. Transportation Conformity Establishes Independent Authority Directing FHWA To Limit Vehicle Access in Addition to an ISR Program, or a TCM in a SIP.

Under the CAA conformity requirements, regional transportation plans, transportation improvement programs (TIPs), and federal transportation projects must *conform* with SIPs. 42 U.S.C. § 7506(c)(1). The Act prevents federal agencies and metropolitan planning organizations from funding or approving any plan which does not 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 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). By rule EPA 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.

To the extent that the State adopts a transportation control measure or an ISR program in its SIP that limits or restricts vehicle operations, the "consistency" requirement in 23 U.S.C. § 109(j) would require that FHWA implement the State requirement on federal highways.

CONCLUSION.

The ACC II rule must be adequate to achieve the NOx reductions needed for an ozone SIP control strategy that will provide for attainment of the NAAQS in California's "extreme" ozone nonattainment areas by the CAA's 2037 deadline. [2] The currently proposed ACC II is not adequate to provide for attainment.

An accelerated ACC strategy that will require all new LD vehicles to be zero emission beginning in 2030, when combined with a TCM strategy designed to gradually phase out the operation of ICEVs during ozone season, can provide for attainment in South Coast by 2037 if paired with a similar program for HD vehicles and EPA expected standards for ships, locomotives and aircraft engines.

Accordingly, ECA requests that CARB –
1) revise the proposed ACC II rule to advance the full compliance deadline from 2035 to 2030, and
2) open a new rulemaking to adopt a TCM for the ozone SIP that gradually expands the zone where ICEVs are not allowed to operate during ozone season, beginning with the port drayage rule now under development, adding a rule barring ICEV access to commercial airports beginning in 2026, expanding the zone to exclude ICEVs from major commercial centers by 2030, and ultimately barring the operation of ICEVs within extreme ozone nonattainment areas after 2035.

Respectfully submitted on behalf of Elders Climate Action,

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[2] Because EPA requires 3 years of data to demonstrate timely attainment, the emission reductions needed for attainment must be achieved by 2035.

SUMMARY OF EXPERT QUALIFICATIONS

Bob Yuhnke was formerly an Assistant Attorney General serving as counsel to the Air Quality Bureau, Pennsylvania Department of Environmental Resources, with primary responsibility for steel industry litigation to enforce the Pennsylvania SIP, and rulemaking to adopt first-in-the nation coke oven emission standards. Later Yuhnke created the Clean Air program at Environmental Defense Fund initially focused on ending acid rain, then on controlling transportation emissions in ozone nonattainment areas, and contributed to enactment of many provisions in the 1990 Clean Air Act Amendments. After leaving EDF, Bob represented STAPPA, local governments, NRDC, EDF, Sierra Club, American Lung Association and community groups in Clean Air Act litigation. In 2008 he created the transportation program at Southwest Energy Efficiency Project working with legislators and MPOs to promote electrification of transportation sources. Now Bob volunteers on behalf of Elders Climate Action's policy team.

Dr. Margaret Lobnitz received her doctorate degree from UCLA and has more than 28 years of experience in the management of multidisciplinary environmental assessment programs with emphasis on air quality, health risk and sustainability. Dr. Lobnitz has provided ongoing strategic air quality support to ACTA for the Alameda Corridor including the since the project's inception over 15 years ago. She has managed air quality analyses for other major Los Angeles based transportation projects involving the movement of goods and people, including the 710 Gateway Project for MTA, the SR-47 Truck Expressway, the ACTA demonstration shuttle train project, SCAG's railroad Main Line and Inland Empire Main Line Studies, the Santa Ana 2nd track project, Caltrans 101 Deck Bridge and the Union Station Run-through project. She has also supported other regional transportation initiatives with the Cities of Reno and San Diego (rail) and Santa Barbara and San Luis Obispo Counties (marine vessels).

Marianne Aydil, Ph.D. is a senior air resource specialist with over 20 years of experience in the consulting field. She has a broad range of experience in emissions inventory development, air permitting, modeling and CEQA and NEPA planning. Her expertise lies in developing custom air emission inventories and combining these with the strategic end-use goal: permitting, planning documents or emission reduction demonstrations, or dispersion modeling for impact assessments. She has been the technical lead for numerous air quality impact studies for the military, transportation infrastructure projects including both rail and highways, port authorities and private industrial clients.