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July 18, 2016

California Air Resources Board - Clerk of the Board
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Re: Comments on Proposed 2016 State Strategy for the State Implementation Plan

On behalf of our members, Airlines for America® ("A4A")[1] thanks the California Air Resources Board ("CARB") for providing this opportunity to comment on its Proposed 2016 State Strategy for the State Implementation Plan ("Proposed SIP Strategy"), inclusive of Appendix B, the Draft Environmental Analysis for the Proposed SIP Strategy (the "Draft EA").

We fully support California's effort to articulate a strategy to attain compliance with National Ambient Air Quality Standards ("NAAQS") and recognize the need for the State to set forth a viable strategy for reducing emissions of both fine particulate matter ("PM2.5") and ozone (requiring reductions in emissions of ozone precursors, including oxides of nitrogen ("NOx")) in the South Coast Air Quality Management District ("SCAQMD") and the San Joaquin Valley Air Pollution Control District ("SJVAPCD"). At the same time, it is critical for the State to achieve environmental objectives consistent with maintaining a growing and vital economy. This paradigm for regulatory action – one which posits improving the environment and public health and preserving and enhancing the economy as coequal imperatives – is reflected in the State's Draft Sustainable Freight Action Plan ("Draft Action Plan"). As emphasized in our recently-submitted comments on the Draft Action Plan, this is a paradigm that we fully support.

A4A and its members have an exemplary environmental record and we are committed to building on that record. For example, nationally emissions from the commercial aviation sector constitute less than two percent of domestic GHG emissions and exhibit much lower growth from 1990 levels (5%) compared to the transportation sector (17%) and on-road sources in particular (24%).[2] At the same time, our industry drives the national and State economies. The Federal Aviation Administration ("FAA") reports that aviation drives nearly 5% of the state's gross domestic product, with commercial aviation accounting for the vast majority of this activity, providing 856,000 jobs and over $112 billion in economic activity.[3] Our success in simultaneously improving our economic and environmental performance is reflected in U.S. Bureau of Transportation Statistics data, which confirms that on a system-wide basis U.S. airlines burned 6 percent less jet fuel in 2015 than in 2000, even though they carried 24 percent more passengers and cargo on a revenue-ton-mile basis.

[1] A4A is the principal trade and service organization of the U.S. airline industry. A4A's members are: Alaska Airlines, Inc.; American Airlines Group; Atlas Air, Inc.; Federal Express Corporation; Hawaiian Airlines; JetBlue Airways Corp.; Southwest Airlines Co.; United Continental Holdings, Inc.; and United Parcel Service Co.; Air Canada, Inc. is an associate member.

[2] *See* Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014 (April 2016), Table A-115. Moreover, this lower rate of growth is from a much smaller base.

[3] *The Economic Impact of Civil Aviation on the U.S. Economy – Economic Impact of Civil Aviation by State* (January 2015) at 23.

The U.S. airlines have achieved this level of simultaneous economic and environmental performance because we have relentlessly pursued and implemented technology, operational and infrastructure measures to minimize our environmental impacts. For example, as a founding member of the Commercial Aviation Alternative Fuels Initiative® ("CAAFI") in 2006, we have provided key support for the development of low-carbon, low-PM[4] sustainable alternative jet fuel, which already is being produced in California and fueling flights from Los Angeles International Airport ("LAX").[5] In addition, A4A and our members have committed the time and resources needed to support the development of economically reasonable, technologically feasible international standards for aircraft engines and aircraft governing noise, NOx, PM, and CO2 (carbon dioxide), through the International Civil Aviation Organization / Committee on Aviation Environmental Protection ("ICAO/CAEP"). With respect to airport ground support equipment ("GSE"), even despite our view that the State lacks the authority to regulate in this area we nonetheless cooperated with the State as it developed a suite of emissions regulations applicable to GSE (as well as other engine types), including its In-Use Off-Road Diesel ("ORD") regulation, the Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines ("PE-ATCM") and related Statewide Portable Equipment Registration Program ("PERP") rule, and Off-Road Large-Spark Ignition ("LSI") regulation.

We are committed to building on this record[6] and it is in this spirit that we present these comments. We look forward to working with CARB staff as they seek to refine this document further in support of reaching needed emissions reductions.

Note on Scope and Effect of Comments

As we noted in our comments on the Draft Action Plan, there is a great deal of overlap between that plan and the subject of these comments (the Proposed SIP Strategy) as well as other important State policy documents, including the recently-issued, Mobile Source Strategy. At the same time, CARB itself highlights that finalization of the Proposed SIP Strategy will not commit the State or Air District to adopt a particular action or other measure identified in the document:

> Adoption of the State SIP Strategy by the Board would create a commitment for new emission reductions by the attainment deadlines for each region. The commitment consists of two components:
> 1. A commitment to bring to the Board or take action on defined new measures; and
> 2. A commitment to achieve aggregate emission reductions by specific dates.[7]

As we understand it, the commitment to "bring to the Board or take action on defined new measures" *does not and cannot* reflect a commitment to adopt and/or implement the measure. The Draft EA also is instructive:

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[4] Alternative jet fuel has a greater than 50% reduction in PM emissions compared to conventional jet fuel. *See* http://www.virent.com/news/virent-bio-jet-provides-more-than-50-reduction-in-particulate-matter-emissions/

[5] United Airlines has begun using renewable jet fuel at LAX and has an agreement with AltAir Fuels for the purchase of up to 15 million gallons over a three-year period. In addition, FedEx and Southwest Airlines have also each signed agreements with Red Rock Biofuels to purchase 3 million gallons per year of renewable jet fuel for use in California beginning in 2017.

[6] More details regarding our environmental record and actions we are taking to ensure that we continue to reduce environmental impacts even as we become increasingly important to the Californian economy are presented in our Draft Action Plan comments.

[7] Proposed SIP Strategy at 17.

> The level of detail in this Draft EA reflects that the State SIP Strategy is a broad program; consequently, the analysis does not provide the level of detail that will be provided in subsequent environmental documents prepared for specific regulatory actions that ARB or other agencies may decide to pursue to reduce criteria air pollutant (CAP) emissions (Cal. Code Regs., tit. 14, § 15152.) As ARB pursues regulations to implement any of the measures discussed in the State SIP Strategy, ***each regulation would go through a project-specific environmental analysis, and, as part of the Administrative Procedure Act (APA) process, a rigorous public review process***. The Initial Statement of Reasons prepared for each proposed ARB regulation, also known as the Staff Report, would include a project-specific EA. Air pollution control districts are also subject to the APA and CEQA when developing regulations, and to CEQA when developing SIP measures that are submitted to ARB for approval and then to U.S. EPA.[8]

We understand this to mean that any regulatory action or other measure identified in the Proposed SIP Strategy ultimately may or may not be formally proposed and could not be finalized without further formal notice and opportunity to comment consistent with the State's APA. In fact, the Draft Action Plan acknowledged that concepts presented there, "may change, be adjusted or new concepts may be added" and that no concept will be implemented unless and until "applicable public processes, necessary financing approvals, technical analysis and economic and environmental reviews" are successfully completed.[9]

In addition, the SCAQMD only very recently released its Draft 2016 Air Quality Management Plan (the "Draft 2016 SCAQMP"). The Draft 2016 SCAQMP is of particular interest in this context because it appears elements in the Proposed SIP Strategy that could affect sources of most direct interest to us, aircraft and GSE, are closely related to and may overlap elements in the 2016 SCAQMP. Indeed, it appears elements of the Proposed SIP Strategy that could affect aircraft would achieve emissions reductions exclusively in the South Coast and be implemented through the 2016 SCAQMP. The Proposed SIP Strategy indicates that the Draft 2016 SCAQMP identifies "a number of complimentary mobile source measures that are designed to implement incentive-based programs as part of the overall SIP Strategy."[10] Thus, the precise relationship between the Proposed SIP Strategy and the Draft 2016 SCAQMP (e.g., which elements are shared and which are implemented separately by the State) is not precisely clear. In any event, we have not yet had the opportunity to review the Draft 2016 SCAQMP in detail, but will provide comments by August 19, 2016, as requested by the SCAQMD.

In light of the circumstances outlined above, we incorporate our comments on the Draft Action Plan[11] by reference and highlight that our comments on the Draft 2016 SCAQMP may provide more detailed views on actions identified in the Proposed SIP Strategy. In addition, we emphasize that these comments on the Proposed SIP Strategy are not intended to constitute a comprehensive or final response to any specific policy, project, action or measure identified in the Proposed SIP Strategy. As such, A4A and our members expressly reserve any and all rights to comment on any regulatory measure or other action identified in the Proposed SIP Strategy if and when it is formally proposed. In addition, we expressly reserve any and all rights

[8] Draft EA at 3 (emphasis added).
[9] Draft Action Plan at 21.
[10] Proposed SIP Strategy at 23 (footnote omitted).
[11] Comments of Airlines for America on the Draft Sustainable Freight Action Plan, submitted July 6, 2016, electronically at www.casustainablefreight.org.

to comment on the State Implementation Plan before it is adopted by CARB and/or the relevant Air District and before it is approved by U.S. EPA.[12]

Comments

The State Must Recognize its Authority to Regulate in the Aviation Sector is Strictly Limited

We recognize the need to achieve NAAQS and to do so while maintaining the vitality of the California economy. As we did in our Draft Action Plan comments, we respectfully ask CARB to recognize that because aviation is a global industry it is critical that aircraft and aircraft engine emissions standards be agreed to at the international level and not imposed unilaterally by one country or set of countries (or individual localities within those countries). We emphasize that A4A and its members have devoted huge amounts of time and resources to support this international process and that it has been very successful, for example:

- As a result of successive, increasingly stringent NOx standards aircraft engines produced today must be about 50% cleaner than under the initial standard adopted in 1997.[13]
- International aircraft noise standards ensure aircraft produced today are about six times quieter than those produced 40 years ago.[14]
- In February 2016 CAEP agreed to adopt a new CO2 emissions standard applicable to newly designed aircraft beginning in 2020 and newly manufactured "in-production" aircraft (aircraft produced according to previously-certified designs) beginning in 2023.
- In February 2016 CAEP also approved and recommended adoption of a new non-volatile PM ("nvPM") standard for aircraft engines (set at a regulatory level that matches the current smoke number visibility standard) that will require all new and in-production engines to be certified to that standard beginning in 2020. CAEP is now working to establish a new stringency level for this standard by February 2019.

In our Draft Action Plan comments we provide a more detailed discussion of the policy and legal bases for federal preemption of state and local authority over aviation and point out CARB itself has acknowledged these limits. Again, we respectfully ask CARB to respect the limits on both its authority and the authority of State political subdivisions, including Air Districts.

The Basis for Projected Emissions Reductions and Economic Costs Related to Certain Actions is Not Clear and the Record Dos Not Provide a Basis for Meaningful Comment on the Proposed SIP Strategy and Draft EA

We also pointed out in our Draft Action Plan comments that as a general matter, we do not have clarity regarding the basis for the emissions estimates (both historical and future) of criteria pollutants or economic impacts that may be attributed to the aviation sector. We are particularly

[12] Importantly, "[t]he total emission reductions and the obligation to propose certain actions would become enforceable upon approval by the U.S. EPA of the elements of the State SIP Strategy included in each air district's SIP." Proposed SIP Strategy at 17..

[13] The SCAQMD provides a useful synopsis of the development of these standards in its *Preliminary Draft of the 2016 AQMP SCAQMD Mobile Source Measures* (April 14, 1016).

[14] We note that there is no reference to the Airport Noise and Capacity Act of 1990 and implementing regulations, 40 C.F.R. Part 161, which require federal approval of any airport noise or access restriction in Draft EA, Attachment 1, Table 17 – Applicable Laws and Regulations for Noise.

concerned about emissions reductions identified with measures that achieve "further development of cleaner technologies" in "aircraft." The Proposed SIP Strategy does identify specific levels of emissions reductions associated with this category of measures (a reduction of 17 tons-per-day ("tpd) in 2023 and 13tpd in 2031[15]). However, these reductions appear to be simply be assigned to the category "based on current growth forecasts, which are undergoing review."[16]

As an initial matter, we are unable to assess the reasonableness of the reductions assigned to measures that could potentially affect aircraft because they are apparently derived from "growth forecasts" to which we do not yet have access. Moreover, there is no clear explanation of the policy and/or other empirical reasons for assigning "reductions" solely on the basis of "growth estimates." In this sense, the assignment of the designated emissions reductions is arbitrary. Also, the SCAQMD describes "MOB-04 – Emission Reductions at Commercial Airports," which appears to be interlinked with this element of the Proposed SIP Strategy, as requiring "a working group [to] be convened with affected stakeholders to discuss airport emissions related issues and provide input in the development of mechanisms to implement this measure."[17] This echoes the affirmation in the Economic Analysis that "[t]he Further Deployment of Cleaner Technologies measures are still in concept phase."[18] As a result, although the Proposed SIP Strategy posits some concepts for addressing aircraft emissions it provides no basis for understanding how CARB anticipates any particular measure may contribute to achievement of those reductions. In fact, it calls into question whether, at this stage, there is any basis for concluding such measures could achieve the assigned emissions reduction levels of 17tpd in 2023 and 13tpd in 2031.

The concern is reinforced in that CARB asserts that "[e]missions from aircraft are a particular challenge, as unlike other off-road sources, their emissions are projected to increase through 2031."[19] We do not understand the basis for this conclusion because we are not provided the underlying analysis. More importantly, the statement seems to imply that, unlike emission reduction targets assigned to other sectors, the target assigned to measures potentially affecting aircraft will be particularly difficult to realize. Especially given federal law precludes the State from regulating aircraft directly or indirectly, this calls into question whether there is any reasoned basis for assigning the projected emissions reductions levels to this category of measures. Further, the Proposed SIP Strategy appears to anticipate that achieving 2023 emission reduction goals in the SCAQMD goals "would require . . . all aircraft meeting today's Tier 8 [NOx] emission levels,"[20] something that both contravenes international standards and is absolutely beyond the authority of State or local authorities. In addition, we note that "[p]etitioning U.S. EPA for federal action on sources under their authority"[21] could not achieve this objective without EPA contravening international aircraft engine standards.[22]

As pointed out in our Draft Action Plan comments, the Economic Analysis baldly affirms that "at this point" "staff is unable to identify any operating costs and/or savings" associated with "Further Deployment of Cleaner Technologies measures."[23] In addition, we have serious

[15] Proposed SIP Strategy at 25, Table 4.
[16] Proposed SIP Strategy at 25, note to Table 4.
[17] SCAQMP at 4-27.
[18] Proposed SIP Strategy, Appendix A at 8, n.7.
[19] Proposed SIP Strategy at 21.
[20] Proposed SIP Strategy at 83.
[21] Proposed SIP Strategy at 18.
[22] EPA also has no authority to regulate aircraft operations – that authority is vested exclusively in the FAA.
[23] Proposed SIP Strategy, Appendix A, at 8, n.7.

concerns (again, set forth in detail in our Draft Action Plan comments) regarding the economic analysis of the "Zero-Emission Airport Ground Support Equipment" measure especially given the very, very low emissions benefits this measure is projected to achieve (pegged at <0.1 tpd statewide for NOx, ROG and PM2.5[24]).

In short, the present record does not provide a basis for meaningful comment on the Draft EA as it relates to emission reductions and economic costs assigned to measures that could affect aircraft and/or GSE. Further, especially in light of the limits on its authority, CARB should clarify that it does not intend the State SIP Strategy to create a commitment to "bring to the Board" or "take action on" a "defined measure" that could potentially affect aircraft. We also ask that CARB clarify that it does not intend the State SIP Strategy to create a commitment to achieve the estimated NOx reductions (of 17tpd in 2023 and 13tpd in 2031) from aircraft emissions.

CARB Should Focus on Positive Economic and Other Incentives

We welcome CARB's support in accelerating to the degree possible the introduction of cleaner technologies into our fleets of aircraft and GSE. Support for research and development is a particular need as successful deployment of technologies, particularly in aircraft, often requires concerted efforts over many years.

At the same time, the State must be careful to ensure that "incentive" strategies are consistent with the limits on its authority to regulate aircraft and in the aviation sector generally. In this context, we reiterate that we question in the strongest possible terms the viability of "[p]artnering with airports to incentivize cleaner aircraft to come to California airports" and urge the State to abandon this tact. We would oppose any attempt to restrict the operation of aircraft with certain emission profiles and/or impose fees or other "incentives" intended to discourage or favor the operation of certain aircraft in California. As indicated above, to the degree the Proposed SIP Strategy envisions meeting emissions reduction targets by adopting programs that would directly or indirectly require "all aircraft [to meet] today's Tier 8 emission levels," the State should also abandon this tact. With respect to GSE, we also highlight our concern that the projected <0.1 tpd NOx, PM2.5 and ROG are very, very low and may indicate that the further measures contemplated in the Proposed SIP Strategy are targeting areas on the margins of technical feasibility. This heightens concerns about the State's authority to regulate in this area. Accordingly, we urge CARB to focus on providing positive incentives that may accelerate introduction of cleaner technologies into the aircraft and GSE fleets rather than on developing regulatory mandates.

In this connection, we are also mindful of CARB's recent experience regarding its PE-ATCM, which applies to a subset of GSE. CARB recently announced that it had "concluded the upcoming 2017 ATCM fleet average standards are not reasonably achievable for fleet owners because cleaner engine technologies did not become available as quickly as was anticipated when the Rule was adopted in 2004."[25] This underscores the difficulties of projecting development of technology and reinforces our view that positive incentives are to be preferred to regulatory mandates.

[24] Proposed SIP Strategy, Table 6.
[25] *See* Q&A for the Portable Diesel Engine ATCM – PERP Regulatory Advisory No. 347, available here: http://www.arb.ca.gov/enf/advs/q_a_advs347_121615.pdf

CARB Should Consider the Potential for Sustainable Alternative Aviation Fuels to Contribute to Reductions in PM Emissions

As discussed in our Draft Action Plan comments, A4A shares California's goal of incentivizing the development of sustainable alternative jet fuels. In the context of these comments, we emphasize that sustainable alternative jet fuel also has significant criteria pollutant co-benefits, including a greater than 50% reduction in PM emissions compared to conventional jet fuel.[26] CARB should consider the potential PM emissions benefits as additional reason to pursue voluntary cooperative efforts that will appropriately incentivize the use of low carbon, low PM sustainable alternative jet fuel. A4A believes commercial airlines could have more success in securing production of sustainable alternative jet fuel if producers were able to generate credits under the LCFS on an opt-in basis. Such an approach would significantly improve the economics of new and existing facilities by allowing them to generate credits from all transportation fuels produced, create additional compliance flexibility for regulated parties, and make California the undisputed hub of sustainable alternative jet fuel production and deployment. As a result, A4A has consistently advocated for CARB to amend the LCFS to include sustainable alternative jet fuel as an eligible credit-generating fuel on a voluntary opt-in basis, which would fully incentivize its production without impermissibly subjecting jet fuel to annual "carbon intensity" standards.[27] We urge CARB to consider adding a measure consistent with this recommendation to the State SIP Strategy.

CONCLUSION

We appreciate the opportunity to comment on this Proposed SIP Strategy and look forward to working with staff as they work to refine and finalize the document.

Sincerely yours,

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[26] *See* http://www.virent.com/news/virent-bio-jet-provides-more-than-50-reduction-in-particulate-matter-emissions/
[27] *See*, *e.g* A4A Comments on Proposed LCFS Readoption, February 17, 2015.