November 7, 2022

Submitted electronically at:

Clerks' Office
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Airlines for America® Comments on CARB's *Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation (September 20, 2022)*

Dear Sir/Madam:

Airlines for America® ("A4A"), the trade association for the leading U.S. passenger and cargo airlines,[1] appreciates the opportunity to comment on the California Air Resources Board's ("CARB") *Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation* dated September 20, 2022 ("Proposed Amendments").[2]

A4A and our members embrace our responsibility to address the environmental impacts associated with aviation. As detailed in the "Background" section below, we have a very strong environmental record that demonstrates our commitment to reducing such impacts even as we continue to provide air transportation services critical to maintaining the growth and vitality of the national, California, and local economies. A4A's commitment extends to reducing greenhouse gas ("GHGs") emissions and emissions that can affect local air quality including emissions of criteria pollutants such as particulate matter ("PM") and oxides of nitrogen ("NOx"). Commercial airlines are dedicated to providing air transportation services to the public that, above all, ensure the safety of our passengers, crew, and the larger public. We view responsible environmental stewardship as essential to our business and have embraced the need to work proactively to address environmental concerns and achieve concomitant public health objectives. Accordingly, A4A and our members fully support the State's efforts to reduce diesel particulate matter emissions and NOx emissions from off-road heavy-duty diesel vehicles in use in California, and the State's other efforts to achieve the State's GHG reduction goals, to attain National Ambient Air Quality Standards ("NAAQS"), and to protect public health.

[1] A4A's members are Alaska Airlines, Inc.; American Airlines Group Inc.; Atlas Air, Inc.; Delta Air Lines, Inc.; Federal Express Corporation; Hawaiian Airlines, Inc.; JetBlue Airways Corp.; Southwest Airlines Co.; United Airlines Holdings, Inc.; and United Parcel Service Co. Air Canada, Inc. is an associate member.
[2] *See Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation*, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/off-roaddiesel/appa-1.pdf (last visited Oct. 6, 2022).

Background

The U.S. airlines have long understood that if we are to remain a critical engine of prosperity and progress we must proactively address and reduce environmental impacts associated with flying. Commercial aviation has been an indispensable pillar of our national, state, and local economies for decades. Prior to the onset of the COVID-19 pandemic, commercial aviation helped drive over 10 million U.S. jobs and over five percent of U.S. Gross Domestic Product ("GDP"). In California, according to the most recent Federal Aviation Administration ("FAA") analysis, civil aviation accounts for about five percent of jobs (over 1.15 million in 2016) and drives over four percent of State GDP ($109.1 billion in 2016).[3] Economic impact studies likewise have affirmed the critical importance of aviation activity at California's major airports to local economies.[4] At the same time, commercial aviation has accounted for a relatively small portion of the nation's GHG emissions. The U.S. Environmental Protection Agency ("EPA") reported that in 2019 (before the COVID-19 pandemic) commercial aviation emissions accounted for 135.4 million metric tons of carbon dioxide equivalent (MMT CO2e)[5] or 2.06 percent of total U.S. GHG emissions (6,558.3 MMT CO2e).[6] For context, this compares to the 140.6 MMT CO2e the commercial aviation sector emitted in 2000,[7] accounting for 2.01 percent of the U.S. total for that year (7001.2 MMT CO2e).[8] The most recent data available from EPA (in its Draft GHG Inventory 1990-2020) indicates that in 2020, when COVID-19 hit, emissions from commercial aviation fell to 82.5 MMT CO2e.[9]

The U.S. airline industry's record demonstrates that we can grow and help the country prosper even as we continue to improve our environmental performance. For example, between 1978 and 2021, the U.S. airlines improved their fuel efficiency (on a revenue ton mile basis) by more than 135 percent, saving over 5.5 billion metric tons of carbon dioxide ("CO_2") – equivalent to taking more than 28 million cars off the road on average *in each of those years*. Similarly, since 1975, even as we quintupled the number of passengers served in the U.S., we have reduced the number of people exposed to significant levels of aircraft noise by 94 percent. The U.S. airlines have continually demonstrated their ability to contribute to the nation's economic productivity, while minimizing their environmental footprint.

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[3] *See* FAA, *The Economic Impact of Civil Aviation on the U.S. Economy –State Supplement* (Nov. 2020), at 10, https://www.faa.gov/about/plans_reports/media/2020_nov_economic_impact_report.pdf (last visited Sept. 12, 2022).

[4] *See, e.g.*, *Economic Impact Analysis – Los Angeles International Airport in 2014* (April 2016*)* (620,610 jobs in Southern California, $37.3 billion in labor income, $126.6 billion in economic output and $6.2 billion in state and local taxes), at i, https://laedc.org/wp-content/uploads/2016/04/LAWA_FINAL_20160420.pdf (last visited Sept. 12, 2022); *2019 Economic Impact Study – San Francisco International Airport* (direct impact of 188,111 jobs, $14 billion in labor income and 42.5 billion in total revenues; total impact of 330,215 jobs, $25 billion in labor income and $72.7 billion in total revenues), at 1, https://www.flysfo.com/sites/default/files/SFO_Economic_Impact_Report_2019.pdf (last visited Sept. 12, 2022); *San Diego International Airport Economic Impact Study – June 2018* (direct impact of 67,200 jobs, over $2 billion in payroll and $6 billion in economic output; total impact of 116,571 jobs, $3.9 billion in payroll and $11.7 in annual output), at 1-2, https://timesofsandiego.com/wp-content/uploads/2018/09/2017-01-06-economic-impact-study.pdf (last visited Sept. 12, 2022).

[5] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2019, Table A-104.

[6] Id. Table ES-6.

[7] Id. Table A-104.

[8] EPA GHG Inventory 1990-2000, Table ES-4.

[9] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sink 1990-2020, Tables A-99.

This environmental record is not happenstance, but the result of a relentless commitment to driving and deploying technology, operations, infrastructure, and sustainable aviation fuel ("SAF") advances to provide safe and vital air transport as efficiently as possible within the constraints of the air traffic management system. Indeed, for the past several decades, airlines have dramatically improved their fuel efficiency and reduced their CO_2 and other emissions by investing billions in fuel-saving aircraft and engines, innovative technologies like winglets (which improve aerodynamics), and cutting-edge route-optimization software.

We are committed to limiting and further reducing our industry's GHG emissions. On March 30, 2021, A4A, together with our member carriers, pledged to work across the aviation industry and with government leaders in a positive partnership to achieve net-zero carbon emissions by 2050 ("2050 NZC Goal").[10] This pledge continues our longstanding commitment to embrace our responsibility to address climate change and reduce commercial aviation's GHG emissions footprint.[11] With consistent analyses showing that tremendous quantities of SAF must be deployed for the industry to meet its climate goals, A4A carriers also pledged to work with the government and other stakeholders toward a rapid expansion of the production and deployment of commercially viable SAF to make 2 billion gallons available to U.S. aircraft operators in 2030. On September 9, 2021, as a complement to the federal government's announcement of the SAF Grand Challenge,[12] A4A and our members increased the A4A SAF "challenge goal" by an additional 50 percent, calling for 3 billion gallons of cost-competitive SAF to be available to U.S. aircraft operators in 2030.[13]

The efforts our airlines are undertaking to further address GHG emissions are designed to limit their fuel consumption, GHG contribution, and potential climate change impacts responsibly and effectively, while allowing commercial aviation to continue to serve as a key contributor to the U.S., global, California, and local economies. At the same time, we continue to build upon our strong record of reducing conventional air pollutant emissions. Our airlines' primary focus is realizing further fuel efficiency and emissions savings through increasing levels of SAF deployment, modernization and optimization of the air traffic management system, public-private research and development partnerships, and a vast array of additional operational and infrastructure initiatives being undertaken in collaboration with regulators, airports,

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[10] *See* A4A, *Major U.S. Airlines Commit to Net-Zero Carbon Emissions by 2050* (March 30, 2021), https://www.airlines.org/news/major-u-s-airlines-commit-to-net-zero-carbon-emissions-by-2050/ (last visited Sept. 12, 2022). On October 4, 2021, the International Air Transport Association ("IATA") and its member airlines followed suit by also committing to achieve net-zero carbon emissions by 2050. *See* IATA, *Net-Zero Carbon Emissions by 2050* (Oct. 4, 2021), https://www.iata.org/en/pressroom/2021-releases/2021-10-04-03/ (last visited Sept. 12, 2022).

[11] Since 2009, A4A and our members have been active participants in a global aviation coalition. Prior to strengthening our commitment in 2021, we had committed to 1.5 percent annual average fuel efficiency improvements through 2020, with goals to achieve carbon-neutral growth beginning in 2020 and a 50 percent net reduction in CO_2 emissions in 2050, relative to 2005 levels. *See* A4A, Major U.S. Airlines Commit to Net-Zero Carbon Emissions by 2050 (March 30, 2021), https://www.airlines.org/news/major-u-s-airlines-commit-to-net-zero-carbon-emissions-by-2050/ (last visited Sept. 20, 2022).

[12] *See* The White House*, FACT SHEET: Biden Administration Advances the Future of Sustainable Fuels in American Aviation (Sept. 9, 2021)*, https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/09/fact-sheet-biden-administration-advances-the-future-of-sustainable-fuels-in-american-aviation/ (last visited Sept. 12, 2022) and Office of Energy Efficiency & Renewable Energy, *Sustainable Aviation Fuel Grand Challenge*, https://www.energy.gov/eere/bioenergy/sustainable-aviation-fuel-grand-challenge (last visited Sept. 12, 2022).

[13] *See* A4A, *U.S. Airlines Announce 3-Billion-Gallon Sustainable Aviation Fuel Production Goal* (Sept. 9, 2021), https://www.airlines.org/news/u-s-airlines-announce-3-billion-gallon-sustainable-aviation-fuel-production-goal/ (last visited Sept. 12, 2022).

manufacturers, and other aviation stakeholders. A4A and our members have been particularly focused on developing low-carbon, sustainable liquid fuel alternatives, understanding that the deployment of tremendous quantities of SAF will be key to the achievement of our climate goals.

In this context, it is also important to point out the A4A Climate Change Commitment and Flight Path detailing the policies and programs needed to achieve our 2050 NZC Goal includes expanding electric infrastructure at airports and greener airport ground support equipment ("GSE").[14] In this connection, we highlight that A4A and our members have a long history of working with the South Coast Air Quality Management District ("District") and CARB to reduce emissions from non-aircraft sources. We are proud of the role we took in working with the District to implement measures in accordance with its 2016 Air Quality Management Plan ("2016 AQMP") to reduce NOx emissions associated with aviation activity. Specifically, we worked for many months with our airport partners and the District to develop voluntary measures that were eventually incorporated into five memoranda of understanding ("MOUs") between each of the South Coast airports[15] and the District. All of these MOUs included a voluntary measure to achieve reductions in emissions of ozone precursors from airport GSE more rapidly than would otherwise be achieved under State regulations. As reported to the District's Mobile Source Committee at its January 22, 2021 meeting, despite the extraordinary challenges airports and airlines have faced in the wake of the COVID-19 pandemic, together with our airport partners we have successfully implemented this voluntary program and achieved real NOx reductions that have brought the District closer to attainment.

In September 2022, A4A submitted comments to CARB on the Proposed 2022 State Strategy for the State Implementation Plan. As noted in those comments, A4A and our member carriers support the efforts described in the State SIP Strategy to work collaboratively with CARB, "EPA, air districts, airports, and industry stakeholders" to develop approaches to achieving emissions reductions.[16]

Comments on the Proposed Amendments

A4A and our members remain committed to working with CARB to achieve the State's GHG emission reduction goals and attain the NAAQS. In that spirit, we offer these comments in hopes they will be helpful to CARB as it works to refine these Proposed Amendments.

As noted above, A4A is proud of our long history of working with CARB to develop reasonable regulations to address GSE emissions, despite continuing concerns regarding the State's authority to adopt and enforce such regulations. It is critical that these Proposed Amendments be appropriately tailored to ensure they are within the scope of CARB's authority as applied to in-use diesel equipment used in aviation operations.[17]

[14] *See* https://www.airlines.org/wp-content/uploads/2021/05/A4A-Climate-Change-Commitment-Flight-Path-to-Net-Zero-FINAL-3-30-21.pdf

[15] These airports are: Hollywood-Burbank Airport (BUR), Long Beach International Airport (LGB), Los Angeles International Airport (LAX), Ontario International Airport (ONT), and John Wayne Santa Ana Airport (SNA).

[16] A4A's comments on CARB's Proposed 2022 State Strategy for the State Implementation Plan (SIP), dated September 22, 2022, p. 6.

[17] These comments incorporate by reference A4A's comments on *CARB's Proposed 2022 State SIP Strategy,* dated September 22, 2022.

I. CARB's authority to regulate off-road equipment used to support aircraft operations is preempted.

A4A has significant concerns regarding CARB's proposal to impose stringent regulatory standards on classes of vehicles including GSE because GSE vehicles are vital to supporting and servicing aircraft and the entire aviation industry.[18] CARB has previously acknowledged in its *Proposed 2022 State Strategy for the State Implementation Plan* that its authority to regulate such equipment under the CAA is outside of its regulatory authority and limited by federal law.[19] Despite this limitation, many of CARB's Proposed Amendments impact, without exception, categories of off-road GSE that are integral to aviation operations.

A. The Proposed Amendments must recognize that the Federal Aviation Administration has exclusive jurisdiction over aircraft and aircraft operations.

It is well-established law that the regulation of aircraft and aircraft operations is within the exclusive jurisdiction of the FAA.[20] The U.S. Congress has long recognized that commercial aviation safety and the efficiency of the National Airspace System depends on the application of a consistent set of regulatory requirements by a primary federal agency – the FAA – with the necessary expertise and capability to develop and administer those requirements. *See City of Burbank,* 411 U.S. at 639; *Arapahoe Cty. Public Airport Auth. v. FAA*, 242 F.3d 1213 (10th Cir. 2001).[21] FAA has taken the position that Federal Aviation Act preemption applies to regulation of GSE. According to FAA, "[a] broad reading of state authority to regulate aircraft operations directly, *or indirectly through ground service equipment limitations*, would be inconsistent with federal preemption of airspace management and aircraft operations." Letter from Paul Dykeman, Deputy Director, Office of Environment and Energy, FAA to Donald Zinger, Assistant Director for Transportation and Air Quality, EPA, at 8 (Aug. 24, 2000) (emphasis added); *see also Id.* ("state regulations are federally-preempted to the extent that they necessarily impinge upon aircraft operations").

As the Supreme Court has observed, "[p]lanes do not wander about in the sky like vagrant clouds. They move only by federal permission, subject to federal inspection, in the hands of federally certified personnel and under an intricate system of federal commands. The moment a ship taxies onto a runway it is caught up in an elaborate and detailed system of controls." *Northwest Airlines, Inc. v. Minnesota*, 322 U.S. 292, 303 (1944) (J. Jackson, *concurring*). This pervasive federal regulatory scheme extends not only to aircraft in flight, but also to aircraft-related operations on the ground.[22] The Aviation Act reserves to the FAA *primary and exclusive*

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[18] Although the Proposed Amendments do not specifically target GSE, CARB has acknowledged that such equipment will be affected. *See, e.g., Proposed Amendments* at 20 ("off-road diesel vehicles are also used by industries such as airlines (ground support equipment) . . . ").

[19] *See Proposed State SIP Strategy*, https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf (last visited Sept. 12, 2022) at 13.

[20] The Federal Aviation Act of 1958 ("Aviation Act") establishes "a *uniform and exclusive* system of federal regulation" of aircraft operations that preempts state and local regulation. *City of Burbank v. Lockheed Air Terminal, Inc*., 411 U.S. 624, 639 (1973) (emphasis added); *see also American Airlines v. Department of Transp*., 202 F.3d 788, 801 (5th Cir. 2000) ("[f]ederal control [over aviation] is intensive and exclusive.") (quoting *Northwest Airlines, Inc. v. Minnesota*, 322 U.S. 292, 303 (1944)); 49 U.S.C. §§ 40101, 40103, 44701.

[21] See also *Abdullah*,181 F.3d at 370 n.10 (aviation regulation is an area where "[f]ederal control is intensive and exclusive") (quoting *Northwest Airlines*, 322 U.S. at 303).

[22] *See, e.g.*, 49 U.S.C. § 40103(b)(2)(B)-(C); *City of Houston v. FAA*, 679 F.2d 1184, 1195 (5th Cir. 1982).

jurisdiction over matters related to aircraft operations and safety, the former of which is closely tied to the non-road vehicles that the air carriers operate at airports. *See City of Burbank*, 411 U.S. at 639.[23] Therefore, CARB is without authority to promulgate measures to the extent they would effectively control or otherwise affect the operation of aircraft.

The safe and efficient operation of aircraft depends on the availability of GSE and other airside vehicles. CARB's proposed phase-out of Tier 0, 1, and 2 engines, proposed restrictions on Tier 3 and 4i engines, and proposed renewable fuel requirements could affect the airline industry in numerous ways, including but not limited to: aircraft ground handling and movement at airports, fueling, ground power units, maintenance support, baggage transfer, and on-site aviation support operations. A4A's members operate large networks that provide passenger and/or cargo service not only at California airports, but at airports throughout the United States and internationally. These networks require large fleets of supporting vehicles and equipment to support aircraft operations. Safe, efficient and reliable operation of aircraft depends on the availability of GSE.

B. The Airline Deregulation Act ("ADA") preempts CARB's ability to regulate off-road equipment related to aviation operations.[24]

The ADA provides that a state "may not enact or enforce a law, regulation, or other provision having the force and effect of law related to a price, route, or service of [an] air carrier . . . ."[25] As the Supreme Court has explained, this language "express[es] a broad preemptive purpose," and ADA preemption applies even if a state law is not expressly designed to affect airline prices, routes, and services, and even if the impact is only indirect.[26] Federal courts have held that ADA preemption extends to regulation of off-road airport support vehicles because such equipment is "integral" to carriers' services.[27]

With the U.S. Supreme Court's broad interpretation of the term "related to," the ADA preempts all state laws that have "a connection with or reference to" airline prices, routes, or services. *See, e.g., Federal Express Corp. v. California Public Utilities Comm'n*, 936 F.2d 1075 (9th Cir. 1991) (finding ADA preemption of state economic regulation of trucking operations of an air cargo carrier that were "part and parcel of the air delivery system," reasoning that: "Every truck carries packages that are in interstate commerce by air. The use of the trucks depends on the conditions of air delivery. The timing of the trucks is meshed with the schedules of the planes.").

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[23] See also *Abdullah v. American Airlines, Inc*.,181 F.3d 363, 370 n.10 (3d Cir. 1999) (aviation regulation is an area where "[f]ederal control is intensive and exclusive").
[24] Airline Deregulation Act, 49 U.S.C. § 41713 (Oct. 24, 1978).
[25] 49 U.S.C. § 41713(b)(1). This statutory provision was previously codified at 49 U.S.C. § 1305(a)(1). *See* 49 U.S.C. App. § 1305(a)(1). In 1994, Congress reenacted this provision at 49 U.S.C. § 41713(b)(1) as part of its reenactment of Title 49, and changed the operative language from "rates, routes or services" to "price, route, or service," but no substantive change was intended. *See American Airlines v. Wolens*, 513 U.S. 219, 223 n.1 (1995).
[26] *Morales v. Transworld Airlines*, 504 U.S. 374, 384, 386 (1992) (holding that ADA preempted state law requirements that expressly referred to airlines and established "binding requirements" upon them); *see also Rowe v. N.H. Motor Transp. Ass'n*, 128 S. Ct. 989 (U.S. 2008) (reaffirming *Morales* and its broad interpretation of ADA preemption).
[27] *See, e.g.*, *Federal Express Corp. v. California Pub. Utilities Comm'n*, 936 F.2d 1075, 1078 (9th Cir. 1991) (holding that California's generally applicable trucking regulation of air carrier's trucking operations was preempted because such trucking operations "are integral to . . . operations as an air carrier"); *Marlow v. AMR Serv.*, 870 F. Supp. 295, 298-99 (D. Haw. 1994) (finding ADA preemption because GSE (jet bridge) form an "integral part" of air carrier services).

See also Rowe v. New Hampshire Motor Transp. Ass'n, 552 U.S. 371 (2008).[28] CARB does not have the authority to implement strategies related to the regulation of off-road equipment that are integral to air carrier operations, to the extent that such actions would impose economic burdens or operational restrictions impacting air carriers' prices, routes, or services.

CARB proposes to phase-out Tier 0, 1, and 2 engines and restrict the addition of Tier 3 and 4i engines. CARB has acknowledged that certain vehicle classes contemplated under the Proposed Amendments include vehicles used as GSE in the aviation sector.[29] However, CARB does not create an exemption for these vehicles in the Proposed Amendments in accordance with the ADA. The EPA has recognized that it cannot impose technology mandates that could engender concerns about the safety of aircraft operations or unduly constrain aircraft operations. This exemption applies not only to equipment at airports that relate to airport operations, but also to fleets of medium and heavy-duty vehicles that support, supply, or facilitate air commerce operations that may be subject to this contemplated NOx emissions reduction scheme. *Federal Express Corporation,* 936 F.2d at 1078 (specifying an air carrier's "trucking operations" are not some separate business venture; they are part and parcel of a unified air delivery system).

II. CARB's authority to regulate construction vehicles with engines under 175 horsepower is preempted under the Clean Air Act.

Similarly, A4A is concerned that CARB's proposal to regulate certain classes of construction equipment would impermissibly regulate vehicles used as GSE at airports. Such action is preempted not only by federal aviation laws, but also the Clean Air Act. CARB's Proposed Amendments would phase-out Tier 0, 1, and 2 engines, and restrict use of Tier 3 and 4i engines. They also require fleets to use R99 renewable diesel in off-road vehicles. However, as CARB correctly acknowledged in its *Proposed SIP Strategy*, it does not have authority to regulate these sources under the CAA.[30] Generally, EPA, and not CARB, has authority to regulate emissions from construction equipment under 175 horsepower.[31] Further, to the extent that CARB intends to regulate equipment above 175 horsepower, A4A reiterates that any regulation that applies to off-road equipment that is integral to aircraft operations must not violate the limitations on CARB's authority established by federal laws.

III. The Proposed Amendments do not consider significant costs and logistical hurdles that the aviation industry will encounter.

A4A supports CARB's goal of reducing emissions from off-road vehicles; however, the Proposed Amendments do not account for the operational infeasibility, lack of commercial availability, and substantial costs that they will pose for the aviation industry. A4A respectfully requests that CARB consider these challenges and exempt aviation GSE from the scope of the Proposed Amendments until the following conditions can be met: (a) commercial availability of

[28] Congress arguably implicitly approved the preemption holding of *Federal Express* by extending to "motor carriers" unaffiliated with airlines an ADA-like preemption of "price, route, or service" regulations. H.R. Rep. 103-677, at 86-89, reprinted in 1994 U.S.C.C.A.N. 1715, 1758-61. Congress took this action to level the playing field in the national ground transportation market.
[29] *Proposed Amendments* at 21.
[30] *See Proposed State SIP Strategy*, https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf (last visited Sept. 12, 2022) at 15.
[31] 40 C.F.R. § 1074.10.

Zero-Emission ("ZE") GSE; and, (b) operational viability of ZE-GSE, meaning ZE-GSE is both (i) task capable, meaning it is able to perform the required task safely, reliably and efficiently, and (ii) infrastructure enabled, including existence of sufficient and reliable capacity to power and charge ZE-GSE.[32]

The Proposed Amendments will impose substantial economic and administrative burdens on the aviation industry beyond what are considered by the Proposed Amendments and its supporting Regulatory Impact Assessment.[33] Based on current estimates from our members, the cost of replacement would be tens of millions of dollars, and these estimates do not account for the economic, administrative, and environmental burdens of having to retire equipment that may still have significant useful life remaining.

Additionally, modifications in GSE due to the Proposed Amendments may require acquisition of supplemental pieces of equipment and charging infrastructure to provide the same level of service, which will impose large costs on airlines and airports. As a result, the Proposed Amendments could inadvertently upend carriers' overall fleet plans and remove their ability to decide how to acquire and deploy low- and zero-emission GSE to support their operations on a network-wide basis most effectively and efficiently, and for the greatest environmental benefit. These outlays, of course, will be borne by companies that are today dealing with the challenges and striving to recover from the severe financial blow brought on by the COVID-19 pandemic.

Some categories of GSE are not commercially available in a low-emission or electrified option. Even if the equipment is commercially available generally, there is no guarantee it will be available in a given geographic area or that a manufacturer will be able to manufacture such equipment in quantities sufficient to fulfill demand or deliver equipment on a schedule required to meet compliance deadlines. A4A supports exempting fleet owners when there are no commercially available zero-emission options. In addition, CARB must also consider these logistical challenges and substantial costs in its final rulemaking. Low-use equipment is often costly to replace and has low-emissions in the aggregate. Further, non-electric GSE tends to have long useful life, and therefore airlines should not be required to replace equipment that is less than 13 years old. Moreover, CARB's proposed recordkeeping and compliance obligations would necessitate the retention of additional staff to oversee fleets for each airline at each airport, which would introduce considerable costs for airlines. Given the high cost and low emissions reductions associated with the proposed requirements for GSE, CARB must re-consider whether they are an effective method of reducing emissions.

Further, it is critical for CARB to define the criteria that it will use to determine whether a vehicle is commercially unavailable and provide a public comment period for the proposed criteria. Similarly, even where GSE may be available on the market, it may not be operationally feasible to deploy the equipment. For example, space constraints at airports may preclude the availability of charging infrastructure necessary to support electrified GSE. Certainly, where no such charging infrastructure is available as a factual matter, it is not feasible to deploy electrified equipment. So too, the duty cycles of available electrified GSE may not be sufficient to support their use. For example, as pointed out above, distances may be too great at certain airports for

[32] In terms of 'task capable' ZE-GSE, certain distances may be too great for ZE-GSE to operate (e.g., at LAX, the distance from cargo operations to aircraft gates is too great for commercially available cargo tractors and bobtails) and procedures would have to be amended to ensure that charging time of ZE-GSE would not impact aviation operations.

[33] Appendix B to the Proposed Amendments, *available at* https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/off-roaddiesel/appb.pdf.

electrified aircraft tows to successfully perform required tasks. In basic terms, to be operationally feasible, GSE must be both task capable and infrastructure enabled. Additionally, there remain significant questions about the wisdom of mandating that GSE be reliant on electronic or low-emissions fuel supplies given GSE's essential role in enabling emergency response. Where a system is reliant on a particular energy source it is potentially vulnerable to disruption due to natural disasters. Thus, even where a product may be commercially available, it is not operationally feasible if it raises concerns regarding the functioning of the National Airspace System or emergency response. Therefore, CARB must also define the criteria it will use to determine whether it is operationally feasible to deploy GSE required under the Proposed Amendments.

IV. The Proposed Amendments' requirements for renewable diesel could impermissibly interfere with aircraft operations, prices, and services, and CARB must exempt airlines from such regulations.

The Proposed Amendments require the use of R99 or R100 renewable diesel in off-road diesel vehicles. Fuel that is 99 percent or 100 percent renewable diesel is not always readily available or available at an economically feasible price point. As discussed above, this means that even where R99- or R100-compatible GSE options are available, they may not necessarily be supported by adequate fuel availability. CARB's Proposed Amendments assume the market will respond to regulation by making the fuel widely available and lowering the price of renewable fuel. If that assumption is mistaken, the cost of fueling off-road GSE could increase dramatically, imposing problematic operational challenges for carriers that will affect routes, prices and services. Because of the constraints on CARB's authority to regulate airlines as discussed above, the Proposed Amendments should exempt airlines from the R99 and R100 fuel requirements in instances where those fuels are unavailable or economically or logistically infeasible.

V. CARB should engage with A4A to support A4A's voluntary emissions reduction initiatives.

Finally, as noted above, airlines are keenly focused on reducing fuel consumption and associated emissions and already work cooperatively with FAA, airports and other stakeholders to seek infrastructure and operational improvements that can optimize flight profiles, reduce taxi times and provide access to clean gate-power. This includes the MOUs entered with the South Coast airports which, as discussed above, include a voluntary measure to achieve reductions in emissions of ozone precursors from GSE faster than would otherwise be achieved under State regulations. In addition, airlines have policies to use electric ground power in lieu of APUs where safe and feasible – always, of course, subject to the final judgment of the Pilot-in-Command. Accordingly, we urge CARB to focus on supporting programs and initiatives that will provide funding to improve airport infrastructure (e.g., FAA's Voluntary Airport Low Emissions ("VALE") program and EPA's Diesel Emissions Reduction Act ("DERA") funding opportunities). The VALE Program has been an important source of funding to improvements to airports such as charging stations and improvements to airport power grids to take advantage of electric GSE. Many of our carriers have cooperated with local air quality management districts to secure support and successfully secure emissions reductions.

Conclusion

Despite our concerns regarding its authority to regulate in this area we have cooperated with CARB over many years as it developed a suite of emissions regulations applicable to GSE (as well as other engine types) to provide a framework for reducing GSE emissions without imposing unnecessary burdens on airlines, airports, or regulators.

CARB has acknowledged that its Proposed Amendments are one measure that would reduce emissions by phasing out old, high-emitting off-road diesel vehicles.[34] A4A provides these comments to highlight the limitations on CARB's authority to promulgate regulations impacting the aviation industry. A4A remains committed to engaging with CARB to identify ways the agency can support the industry's voluntary measures to reduce its emissions. Even a reasonable, practically achievable, and properly scoped policy will be ambitious and likely impose significant costs on and operational challenges to fleet owners and operators. Developing a fully considered, sound policy before it is implemented will avoid uncertainty, potential legal infirmities and unnecessary conflict in the implementation phase, ensuring long-term viability and setting a firm foundation for achieving the objectives shared by the industry and CARB in both the near and long term.

This type of initiative closely aligns with the commercial aviation industry's commitment to providing safe, reliable commercial air service that is a critical engine of strong, environmentally sustainable economic growth. Accordingly, A4A commends CARB on its efforts to reduce GHG emissions within the state of California and achieve the NAAQS, but, requests that, at a minimum, CARB include the elements discussed above in any finalized regulation and consider exempting airline GSE and other equipment used by the aviation industry from the scope of its Proposed Amendments.

Thank you for your consideration of our comments. Please do not hesitate to contact us if you have any questions.

Sincerely yours,

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[34] Proposed Amendments at 15.