Via Electronic Filing with the California Air Resources Board

06/23/2022

RE: California Air Resources Board (CARB) Draft 2022 Climate Change Scoping Plan Update

Dear Chair Randolph and Members of the California Air Resources Board,

SEIU California, on behalf of the Service Employees International Union, United Service Workers West ("SEIU USWW" or "Union") local submits the following comment to the California Air Resources Board ("CARB") concerning its Draft 2022 Scoping Plan Update (the "Plan"), specifically as it relates to the aviation industry, aviation emissions and sustainable aviation fuel ("SAF").[1]

SEIU USWW proudly represents a diverse workforce of more than 40,000 janitors, security officers, airport passenger service workers, and allied industries workers in California. Nationwide, the Service Employees International Union ("SEIU") has organized more than 36,000 contracted aviation service workers. Airport workers, many of whom are people of color, immigrants, and women, are on the frontlines of our nation's aviation system, keeping cabins clean, airports secure, and elderly and disabled passengers cared for – even through a global pandemic, climate disasters, and busy travel seasons. SEIU USWW recently negotiated a groundbreaking agreement with LAX to address issues of air quality in surrounding neighborhoods and help create good quality passenger service jobs.[2]

We commend CARB's 2022 Scoping Plan update assessing progress towards achieving the State's emissions reduction goals and setting out its course of actions to achieve statewide carbon neutrality by no later than 2045. As will be further discussed below, we also commend CARB for setting ambitious targets for decarbonizing the aviation industry. Aviation emissions are a major driver of climate change and have negative impacts on our members who work at and live near airports. As an industry that has been notoriously difficult to decarbonize, aviation warrants special attention to alleviate these negative impacts. Furthermore, with near-airport communities and many airport job classifications comprised largely of people of color, the impacts of aviation emissions becomes an issue of both environmental justice and environmental equity.

CARB Must Address the Growing Climate & Environmental Justice Impacts of the Commercial Aviation Industry

Aviation is a significant driver of global climate change. Globally, the aviation industry is responsible for 2% of carbon emissions from fossil fuel use,[3] with the U.S. accounting for nearly one quarter of that

[1] See California Air Resources Board, Draft 2022 Scoping Plan Update May 10, 2022

[2] Agreement Between Los Angeles World Airports and SEIU USWW, Attachment A to Report to the Board of Airport Commissioners, Los Angeles World Airports Board of Airport Commissioners, Meeting Date 02/03/2022

[3] Graver, Brandon, et al., "CO2 Emissions from Commercial Aviation, 2018", International Council on Clean Transportation, Sep. 19, 2019. https://theicct.org/publication/co2-emissions-from-commercial-aviation-2018/

total.[4] According to the European Commission, "if global aviation was a country, it would rank in the top 10 emitters."[5] This footprint is only projected to grow significantly in the decades to come, with the international industry projected to grow 300 to 700% between 2020 and 2050.[6]

Locally, aviation emissions are even more significant. Aviation in California - including interstate and international aviation - is responsible for 17.5% of the state's transportation greenhouse gas ("GHG") emissions and 8.2% of all the state's GHG emissions.[7] This data is unsurprising, given that 15% of all domestic available seat miles ("ASMs") and 1 in 10 domestic flights originate in California.[8] California also has the largest intrastate aviation market in the contiguous U.S., with more departures and ASMs than any other state in the Lower 48; 1 in 3 departures from California airports are for intrastate flights.[9]

Aviation emissions represent a significant environmental justice issue. These emissions are generated for the benefit of investors in a handful of large airlines and a small minority of wealthy Americans that fly frequently. A survey by the trade group Airlines for America found that in 2017 less than half of Americans had taken a flight in the prior year.[10] The environmental group Possible reports that among all Americans, just 12% are responsible for two thirds of all flights.[11] The richer half of American households are also estimated to be responsible for about 80% of all flights.[12]

While a small minority generates most of the emissions from aviation, as outlined in the section below, workers, low-income communities, and communities of color bear the brunt of the negative effects from aviation emissions and climate change. In keeping with its stated commitment to environmental justice, CARB must take action to reduce aviation emissions.[13]

Aviation Emissions Directly Impact Airport Workers and Airport-Adjacent Communities

The localized impacts of the industry's climate impacts are not often discussed or well understood, but essential to consider. In 2014, an air quality study by a team at USC's School of Medicine found that ultrafine pollution from jet airplanes at LAX reached as far as 10 miles downwind of the airport[14], and was still found at levels double normal concentrations at that distance. Concentrations within a 2-mile area east of the airport were found at levels 10 times higher than non-impact areas. The study noted

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[4] Graver, Braondon, et al., "CO2 Emissions from Commercial Aviation: 2013, 2018, and 2019", International Council on Clean Transportation, Oct. 8, 2020. https://theicct.org/publications/co2-emissions-commercial-aviation-2020

[5] "Reducing emissions from aviation", European Commission. https://ec.europa.eu/clima/policies/transport/aviation_en, Accessed 10/2019

[6] European Commission. "Commission Staff Working Document: Full-length report Accompanying the document 'Report from the Commission to the European Parliament and the Council Updated analysis of the non-CO2 climate impacts of aviation and potential policy measures pursuant to EU Emissions Trading System Directive Article 30(4)". Nov. 23, 2020. Part 2 of 3, page 116.

[7] California Air Resources Board Greenhouse Gas Emissions Inventory Query Tool. Comparison of All Sectors, Transportation Sector, and Aviation Subsector with All Inventory Accounting for year 2019. Data available at https://ww2.arb.ca.gov/applications/greenhouse-gas-emission-inventory-0

[8] U.S. Department of Transportation, Bureau of Transportation Statistics. T-100 Data, Domestic Segment, US Carriers Only, 2019.

[9] *Ibid*.

[10] Heimlich, John P. and Jackson, Chris, "Air Travelers in America: Findings of a Survey Conducted by Ipsos", Airlines for America, Feb. 20, 2018. https://www.airlines.org/wp-content/uploads/2018/02/A4A-AirTravelSurvey-20Feb2018-FINAL.pdf, page 3.

[11] Lisa Hopkinson and Dr. Sally Cairns, "Elite Status: Global inequalities in flying", Report for Possible, Mar. 2021.

[12] *Ibid*.

[13] "Environmental Justice", California Air Resources Board. https://ww2.arb.ca.gov/our-work/topics/environmental-justice

[14] Hudda, Neelakshi, et al., "Emissions from an International Airport Increase Particle Number Concentrations 4-fold at 10km Downwind", USC Keck School of Medicine, May 29, 2014.Page 1. https://pubs.acs.org/doi/10.1021/es5001566

that "a significant fraction of urban dwellers living near airports likely receive most of their outdoor PN [particle number] exposure from airports rather than roadway traffic."

The ultrafine particles (UFPS) found downwind from LAX are an unregulated pollutant known to contribute to reduced lung function and airway inflammation in populations with asthma that are regularly exposed.[15] It is easy to speculate that this could explain, in part, why the South Los Angeles area has some of the highest asthma emergency visit and hospitalization rates in the country[16], and why the zip code adjacent to LAX has one of the highest rates of asthma of any neighborhood in the county.[17] In fact, all of the pollutants that LAX is a statewide leader[18] in - CO, NO_x, SO_x, Particulate Matter, organic gasses - have known health risks.

The health risks of being exposed to this kind of pollution - either as a worker at the airport or a resident of a neighboring community - is not as well understood as it could or should be. This is why the City Council in Los Angeles voted to fund a pair of studies looking into this very question earlier this year.[19] That this pollution stands to disproportionately impact communities of color - populations within three miles of hub airports tend to have nearly twice the proportion of people of color than the population at large[20] - creates a disturbing question of environmental justice with respect to the industry and its continued growth. This is one of many reasons that CARB should be making aggressive and achievable strides toward decarbonizing the industry.

Strong Measures Are Needed to Reach the Lofty Aviation Emissions Goals in the Draft 2022 Scoping Plan Update

For all the reasons outlined above, we commend CARB for setting aggressive targets for the aviation industry in the Plan. The aviation targets in the plan's proposed scenario[21] are five years ahead of the federal government's target for meeting all aviation fuel demand with SAF;[22] and the federal government has set no targets for hydrogen or battery-powered aviation. However, due to the aggressive nature of these targets, CARB will need to take strong action to ensure that they are met.

With respect to hydrogen and electric powered aircraft, the challenges with these technologies are well known, and commercial aircraft are not predicted to be available until 2030 or later.[23] While California's

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[15] Gutschow, Wendy, "Airport pollution linked to acute health effects among people with asthma in Los Angeles", USC Environmental Health Centers, Feb. 14, 2019. https://envhealthcenters.usc.edu/2019/02/ultrafine-particle-pollution-lax.html

[16] "Between the 110 and the 405; Environmental Injustice in South Los Angeles", Scope LA, Nov. 27 2017.

[17] LA DoT, "Asthma (18 & Over) 2011-2012 AskCHIS Neighborhood Edition", 03/01/16

[18] CA Air Resources Board, Facility Search, 2018 Criteria Pollutants Data.

[19] Official Action of the Los Angeles City Council adopting Trade, Travel, and Tourism Committee Report, Council File No. 22-0066, Apr. 29, 2022.

[20] Woodburn, Amber Victoria "Pushback in the Jet Age: Investigating Neighborhood Change, Environmental Justice, and Planning Process in Airport-Adjacent Communities", University of Pennsylvania, 2016. Table 4.1, page 140. https://repository.upenn.edu/edissertations/2101/

[21] California Air Resources Board, Draft 2022 Scoping Plan Update, , supra n.1 at 58.

[22] U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, "Sustainable Aviation Fuel Grand Challenge", https://www.energy.gov/eere/bioenergy/sustainable-aviation-fuel-grand-challenge.

[23] Warwick, Graham, and Dubois, Thierry, "What Are The Electric-Propulsion Challenges In Commercial Aviation?", Aviation Week, Apr. 30, 2021. https://aviationweek.com/special-topics/sustainability/what-are-electric-propulsion-challenges-commercial-aviation; see also Harris, Mark, "ZeroAvia's hydrogen fuel cell plane ambitions clouded by technical challenges", TechCrunch, Apr. 4, 2021.

significant intrastate aviation market (as noted above, 1 in 3 departures are for intrastate flights) means that there will likely be a market for the smaller and shorter-range aircraft powered by these technologies, longer haul flights will need to be powered by liquid fuel for the foreseeable future. For that reason, CARB must ensure that it adopts strong policies with respect to SAF.

First among these must be fully incorporating jet fuel into the state's Low Carbon Fuel Standard (LCFS), which appears to be contemplated in the Plan.[24] While incentives proposed in the Plan[25] and in pending legislation[26] may lead to some increases in SAF production and uptake, incorporating jet fuel into the LCFS will add stronger market signals and end the preferential treatment that jet fuel has over other liquid fuels. With jet fuel representing nearly nearly 10% of liquid fuel use in 2020 (a year with record low utilization of aircraft), there is no reason for it to be excluded.[27] The stronger carbon intensity targets that CARB is proposing,[28] if also applied to jet fuel are also likely to help with meeting SAF targets.

Second, CARB must maintain strong oversight of SAF to ensure that feedstocks and processes used in its production are leading to tangible reductions in greenhouse gas (GHG) emissions. The Plan rightly states that "alternative fuel production must not come at the expense of global deforestation, unsustainable land conversion, or adverse food supply impacts".[29] In a letter to White House National Climate Advisor Gina McCarthy, several organizations highlighted serious concerns with crop-based biofuels and made recommendations to ensure that the Biden Administration's "SAF Grand Challenge" led to measurable GHG reductions and avoided adverse impacts.[30] We encourage CARB to consider these recommendations with respect to any incentives for SAF.

Finally, we note that the Plan appears to rely on the assumption that incentives and other market signals will lead to SAF production at prices acceptable to the airlines such that they will substitute it for conventional jet fuel simply because it is available. We do not believe that this is necessarily true, especially if the currently-high oil and jet fuel prices again drop. CARB should consider setting enforceable benchmarks for SAF uptake by airlines in California as an additional measure to ensure that targets are met.

California Should Consider Jet Fuel Tax Policy as Another Means to Decarbonize the Industry

To close, we wish to highlight jet fuel tax policy as a final avenue – albeit one outside CARB's direct purview – that the state of California should consider to encourage decarbonization of the aviation industry. California currently has one of the lowest excise tax rates on jet fuel, among states that have

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[24] "Strategies for Achieving Success", Draft 2022 Scoping Plan Update at page 154.
[25] *Ibid*.
[26] "AB-1322 California Global Warming Solutions Act of 2006: aviation greenhouse gas emissions reduction plan." AB 1322. 2021-2022 Session.
[27] "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020", Environmental Protection Agency, Page ES-10.
[28] Draft 2022 Scoping Plan Update at page 154.
[29] *Ibid.*
[30] International Council on Clean Transportation, "Re: Crop-based Biofuels under the Sustainable Aviation Fuel Grand Challenge," May 2022

such a tax: out of 39 states and U.S. territories with a jet fuel tax, only five have a lower rate than California.[31] On top of this low rate, commercial carriers are exempt from the tax altogether.[32]

The tax - and exemption - are currently neutral on the question of greenhouse gas emissions; they apply to any liquid fuel used for propelling jet or turbine aircraft engines.[33] California could pass legislation to remove this tax exemption for petroleum-based jet fuels, adding further incentive for SAF production and uptake. Doing so would raise considerable revenues for the state's Aeronautics Account[34] which could help fund electric ground support equipment, public transit connections, and other projects to help decarbonize the state's airports.

CARB's Scoping Plan Updates are a Commendable Start, But More Will Need to Be Done to Promote Long-term Solutions Within the Industry

California *should* be leading the way on climate change, and it is encouraging that the benchmarks set for the aviation industry within this Scoping Plan Update are more aggressive than what the federal government has put forth. But more will need to be done to promote long-term solutions within the industry, especially an industry whose growth and impact is projected to grow in the coming decades.

As CARB and other decision makers move forward, it will be vital to consider new approaches to ensuring that commercial aviation is part of meaningful solutions on climate change. Consider higher standards for qualifying feed stocks so that Sustainable Aviation Fuel is not a false solution, and find ways to promote actual uptake of qualifying SAF. Fully incorporate jet fuel into the Low Carbon Fuel Standard. Reexamine problematic financial incentives for conventional jet fuel, such as the exemption to the jet fuel excise tax.

Once again, we appreciate your work on this issue and share your desire to see drastic emissions reductions from the airline industry. We urge you to consider our recommendations so that we can continue on a path toward a more sustainable, more accountable industry.

Sincerely,

/s/

Rene Bayardo
Government Relations Director
SEIU California

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[31] "State aviation fuels tax rates", U.S. Energy Information Administration. Data as of January 2022.

[32] See CA REV & TAX §§ 7385-7398; the Aircraft Jet Fuel Tax is imposed on "aircraft jet fuel dealers" when fuel is sold to an "aircraft jet fuel user" (§ 7392). Airlines ("a common carrier by air engaged in the business of transporting persons or property for hire or compensation…") are excluded from the definition of "aircraft jet fuel user" (§ 7389).

[33] CA REV & TAX § 7387.

[34] "Aircraft jet Fuel – Frequently Asked Questions (FAQs)", California Department of Tax and Fee Administration. See "How is the aircraft jet fuel tax revenue used?". https://www.cdtfa.ca.gov/taxes-and-fees/aircraft-jet-fuel-faq.htm