



601 Pennsylvania Ave NW, Suite 250  
Washington, D.C. 20001  
T. 202-737-7950  
F. 202-273-7951

[www.aopa.org](http://www.aopa.org)

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The Honorable Liane Randolph, Chair  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

## **RE: DRAFT SCOPING PLAN – ENVIRONMENTAL ANALYSIS**

The Aircraft Owners and Pilots Association (AOPA) is the largest general aviation membership organization in the United States, representing over 300,000 pilots and aircraft owners, and we wish to thank the California Air Resources Board and its staff for their work. Our concern rests on the use of the term “aviation” and its broad application throughout the plan and analysis for achieving California’s aggressive climate goals. This term lacks context within the plan and treats all aviation the same when there are clear differences.

California is not the only state seeking to reduce greenhouse gas (GHG) emissions by curbing the production and use of fossil fuels for transportation purposes. Unfortunately, the impacts proposed in the scoping plan regarding the use of fossil fuels, absent any context for the use of the term “aviation,” poses very serious implementation problems for our members and for the general aviation sector in general. General Aviation is a \$247 billion industry and employs over 1.2 million people across the country making the impacts of these actions harmful to California’s economy.

### **AVIATION FUELS**

The scoping plan and environmental analysis outline scenarios based on actions needed to reduce GHG emissions from the AB 32 Inventory sectors – including aviation. The aviation sector is tasked with (1) having 20% of aviation fuel met by electricity or hydrogen fuel cells in 2045, and (2) sustainable aviation fuel (SAF) meeting most of the remainder of aviation fuel demand not transitioned to hydrogen or batteries.

It is true these scenarios would reduce the demand for petroleum aviation fuel. Unfortunately, even the most optimistic projection for an airworthy electric aviation fleet is at least decades away or longer. Not to mention the enormous technological advances necessary for the transition, large-scale production of these engines, affordability for consumers, and providing the necessary infrastructure and energy needed to account for an all-electric fleet of aircraft. Energy

reliability and affordability should be primary motivators for determining whether the aviation sector can move towards a fully electrified fleet. Moreover, vast improvements in battery technology and consumer confidence will be necessary to fully transition commercial operations, not to mention general aviation operations, to electricity.

Sustainable Aviation Fuel (SAF) is not an option for the vast general aviation fleet utilizing piston-powered engines. SAF has been found to be a suitable replacement for Jet-A type fuels, used almost exclusively by commercial operations and airplanes with turbine-powered engines. Requiring the general aviation sector to replace AvGas with SAF would ground piston-powered engines indefinitely as there is no suitable replacement for those engines. Piston aircraft cannot use SAF as a viable fuel option and there are no alterations to the engine design that would currently allow them to do so.

Notwithstanding any of the above concerns, the build-out of energy infrastructure and alternative fuel creation will rely upon the State and local governments' ability to permit and streamline the processes necessary to bring these goals to fruition. Delays in any of these projects will only extend the timelines for achieving carbon neutrality.

Finally, California's continued efforts to curb fossil fuel production and refining capacity will significantly harm the ability of any transportation sector to utilize non-fossil fuels to meet the 2045 goal without relying on outside sources. For example, SAF and 100UL AvGas will require vast refining capacity to meet the growing number of commercial flights needed to meet consumer travel demands. Absent state actions, California will continue to rely on imported oil to meet demand. This is in addition to the numerous modes of transportation needed to bring these products into the state and the amount of GHG emissions created because of these restrictions.

### **ENVIRONMENTALLY FRIENDLY**

The general aviation sector has been aggressively pursuing environmentally friendly technology and processes for over a decade. Vast improvements in SAF use by turbine-powered airplanes and jets will greatly reduce emissions as its production is brought online. Even SAF is not completely carbon neutral, but its blend of biomass fuel combined with up to 50% of traditional jet fuel can reduce the carbon emission footprint by up to 80 percent. Most recently, the FAA approved a supplemental type certificate, after a years-long effort led by AOPA and the AvGas Coalition, for unleaded aviation fuel for the piston-powered aircraft fleet. With these actions, general aviation will no longer be the remaining consumer of lead-based fuel. Like SAF, unleaded aviation fuel will take time to blend and produce in the quantities necessary to fully transition away from 100LL.

California has the largest contingent of AOPA members and provides some of the best weather for them to fly in the golden state. Many of the technological advances in aviation are happening

in this state with broad support from community leaders. The general aviation community is a \$30 billion economy in California and provides over 148,000 jobs and \$11.3 billion in labor income to the state's total economic output. It is also home to airplane mechanic shops and flight schools serving tens of thousands of Californians. The lack of context provided for in this plan could cripple an entire industry and eliminate thousands of jobs or force them to leave the state.

We stand ready to help California achieve its climate goals, but caution against the broad use of the term "aviation" provided in the scoping plan and analysis. AOPA asks the California Air Resources Board to please provide a definition for "aviation" and ultimately context for its use within the plan and analysis. This context will be vital when determining how impactful any of these regulations will have on general aviation in California and AOPA members.

Sincerely,



**Jared Yoshiki**  
*Western Pacific Regional Manager – AOPA*

CC: Members, California Air Resources Board  
Members, Aviation Caucus, California State Legislature