

CALIFORNIA DEPARTMENT OF TRANSPORTATION
AIRPORT GRANT ELIGIBILITY REGULATION UPDATE

INITIAL STATEMENT OF REASONS

Background

California's Public Airports

California's civil aviation industry contributes \$85 billion to the state's economy and supports more than 380,000 jobs each year. More than 175 million passengers and \$114.5 billion of freight goods are transported by air through California's airports, accounting for 16 percent of the nation's international visitors and almost one-fifth of the \$598.7 billion in freight goods transported by air nationwide.

There are 241 publicly owned airports within the State of California including 22 Commercial Service airports, which receive scheduled passenger service and have at least 2,500 passenger boardings each calendar year, and 219 General Aviation (GA) airports, which support a wide range of aeronautical activities including corporate, business, and private flying, cargo and express delivery services, and other businesses and services. Additionally, GA airports improve public safety and community connectivity, support the local and regional economy, and are an essential component of a sustainable, equitable, and multi-modal transportation network.

- **Public Safety:** GA airports play a vital role in supporting emergency rescue, fire-fighting, and medical services. Multiple GA airports across California serve as air-attack bases during fire-fighting season and are used for fire suppression operations and the transport of crews, equipment, and injured personnel. GA airports serve air ambulance and

medical transport companies and are particularly important in remote or underserved areas. They can also be utilized as emergency evacuation routes during disasters and as staging areas for disaster relief and recovery efforts.

- **Community Connectivity:** GA airports contribute to community connectivity by providing access to remote or underserved regions where commercial airline service may be limited or unavailable. They facilitate transportation for residents, businesses, and organizations in these areas, supporting economic development and maintaining connections with larger urban centers.
- **Pilot Training:** Many GA airports host flight training schools and academies, including providing classroom instruction and practical flight experience. These airports serve as training grounds where students can practice takeoffs, landings, and other flight maneuvers in a controlled environment. Some airports also host community youth programs, aviation and airshow days, and other community functions.
- **Aircraft Maintenance and Repairs:** GA airports often have maintenance and repair facilities. These facilities offer services ranging from routine inspections and maintenance to more extensive repairs and modifications. GA airports provide a convenient location for aircraft owners to have their planes serviced and ensure they remain in safe and airworthy condition.
- **Electrification and Advanced Air Mobility:** GA airports are hubs of innovation in the fields of Advanced Air Mobility (AAM) and electric aircraft. Several GA airports in California serve as operations headquarters and test sites for AAM Original Equipment Manufacturers. As this mode of transportation advances from testing to deployment, GA airports will likely serve as inter-modal transportation hubs.

Public airports receive their funding from a combination of sources including federal and state programs, local measures, and on-airport revenues. The California Public Utilities Code - Chapter 9, State Aeronautics Act (SAA), establishes State grant programs that help fund construction projects, land acquisition, equipment procurement, and other expenditures for General Aviation airports. Revenues for these grant programs are derived from excise taxes levied on GA aircraft fuel sales. These grant programs are administered by the California Department of Transportation (Caltrans) pursuant to the SAA and associated regulations (California Code of Regulations - Title 21 - Division 2.5 - Chapter 4).

Climate, Energy, and Sustainability Priorities

The State of California has been pursuing a bold climate agenda to reduce carbon emissions and build a healthy, sustainable, equitable, and resilient energy and transportation economy.

As part of Governor Newsom's California Climate Commitment, four climate related bills were signed into law in 2022 which dedicated \$54 billion to combat climate change. One of those bills was the 2022 California Climate Crisis Act (AB 1279) which set forth a policy for the State to achieve net zero greenhouse gas emissions no later than 2045. The State's emissions reduction targets are laid out in the California Air Resources Board (CARB) 2022 Scoping Plan for Achieving Carbon Neutrality which is a sector-by-sector roadmap to achieve that goal. For the aviation sector, the Scoping Plan has set a goal of having at least 20% of aviation fuel demand be met by electricity (batteries) or hydrogen (fuel cells) with the remaining fuel needs be met by Sustainable Aviation Fuels (SAFs) by 2045. The Scoping Plan also sets targets of 100% Zero-Emission Vehicle sales and for reducing reliance on fossil fuels for electricity generation.

Another bill, the Clean Energy, Jobs, and Affordability Act of 2022 (SB 1020) sets goals for retail sale of electricity to reach 100% renewable energy by 2045 with step goals of 90% by 2030 and 95% by 2040. This bill builds on SB 100, California Renewables Portfolio Standard Program: emissions of greenhouse gases, passed in 2018. These interim targets require energy producers to make steady progress toward the full decarbonization of California's electricity grid. The bill also requires all state agencies to rely on 100% renewable energy and zero-carbon resources to serve their own facilities by 2035.

The State's vision and goals of reducing greenhouse gas emissions, mitigating the impact of climate change, and building a sustainable and inclusive economy are also articulated in the Governor's Executive Order (EO) N-19-19, the California State Transportation Agency's - Climate Action Plan for Transportation Infrastructure (CAPTI), and the 2020-2024 California Department of Transportation Strategic Plan.

Statutes Authorizing the Adoption of This Regulation

The State Aeronautics Act (SAA), Public Utilities Code [Division 9, Sections 21001 et seq.](#), was established for "to further and protect the public interest in aeronautics and aeronautical progress" ([SAA Section 2102](#)).

The SAA allows for the establishment of regulations as stated in [SAA Section 2102 \(e\)](#).

"(e) Establishing only those regulations which are essential and clearly within the scope of the authority granted by the Legislature, in order that persons may engage in every phase of aeronautics with the least possible restriction consistent with the safety and the rights of others."

Additionally the SAA assigns the California Department of Transportation (Caltrans) to administer its statutes including the responsibility for proposing new

regulations or amending or deleting existing ones as described in [SAA Section 21204](#),

“The department may adopt, administer, and enforce rules and regulations for the administration of this part.”

and [SAA Section 21243](#),

“The department may make and amend general or special rules, regulations, and procedures and establish minimum standards, consistent with and clearly within the scope of federal legislation governing aeronautics and the rules, regulations, and standards issued there under...”

Statutes Being Implemented, Interpreted, Or Made Specific by This Regulation

This proposed regulatory action will further implement, interpret, or make specific:

SAA Section 21001 sub-sections (a), (b), (d), and (i).

“The purpose of this part is to further and protect the public interest in aeronautics and aeronautical progress by the following means:

(a) Encouraging the development of private flying and the general use of air transportation

(b) Fostering and promoting safety in aeronautics...

(d) Granting to a state agency powers, and imposing upon it duties, so that the state may properly perform its functions relative to aeronautics and effectively exercise its jurisdiction over persons and property, assist in the development of a statewide system of airports, encourage the flow of

private capital into aviation facilities, and cooperate with and assist political subdivisions and others engaged in aeronautics in the development and encouragement of aeronautics...

(i) Developing, in cooperation with the private sector, airport management, local jurisdictions, federal authorities, and the general public, informational programs to increase the understanding of current air transportation issues including, but not limited to, aviation safety, planning, airport noise, airport development and management, and the role of aviation in the economic development of the state, as an integral part of the state's transportation system..."

SAA Section 21681 (f) (15)

"21681. As used in this article, the following terms have the following meanings:...

(f) "Airport and aviation purposes" means expenditures of a capital improvement nature, including the repair or replacement of a capital improvement, and expenditures for compatible land use planning in the area surrounding an airport, for any of the following purposes:...

(15) Other capital improvements as may be designated in rules and regulations adopted by the department."

SAA Section 21683

"21683. Any public entity may apply to the department each year for the allocation of funds for the acquisition or development of airports. The commission may, pursuant to rules and regulations promulgated by the department, make an allocation to the public entity if it determines that the proposed acquisition or development is feasible and in accordance with the policies and standards established by the department. The

department shall make recommendations to the commission on all applications. Such allocations shall be represented as subventions in the department budget in accordance with Section 21206. No moneys paid under this section shall be expended for operation and maintenance. No payment shall be made under this section to any public entity for any airport on which general or commercial aviation activities are substantially restricted if the airport is licensed to conduct such activities by the department. The department shall determine whether or not general or commercial aviation activities are restricted."

Purpose of Regulation Change

The purpose of this regulation update is to create a funding pathway for California's publicly owned general aviation airports to apply for project grants that help address the State's priorities of reducing carbon emissions, improving air quality, transitioning to renewable energy, and promoting an equitable, sustainable, and resilient transportation system and workforce.

The regulation update is specific to the SAA Acquisition and Development (A&D) Program. The A&D program provides grants for up to 90% of the project cost and requires the airport sponsoring agency to provide the remaining 10% amount (SAA Section 21683). The project categories that are eligible for A&D grants are established in SAA sections 21207 and 21681(f) and Title 21, Section 4061 of the California Code of Regulations (CCRs). Examples of these project categories include runway pavement rehabilitation, purchase of radio communication equipment, water and sanitary systems, land acquisition, and airport land use compatibility planning studies. On the other hand, categories not explicitly authorized by statute or regulations are not eligible to receive a grant (CCR Title 21 Section 4059 (e)). As such, projects that address new State

priorities and changes in technology are not eligible for A&D funding, unless regulations are updated.

This regulatory action will amend CCR Title 21 Section 4061 to add four additional project categories for A&D funding eligibility as follows: (1) Charging Stations, (2) Renewable Energy Grid System, (3) Educational Facilities and Equipment, and (4) Fueling Facilities.

Problems To Be Addressed by Regulatory Action and Rationale For Determination of Regulation Necessity

(k) Charging Stations. Procurement and installation of airport charging stations for zero-emission vehicles or aircraft and any capital improvements necessary for their installation or operation.

General Aviation airports are looking to transition their on-airport gasoline powered vehicles, ground support equipment (such as tugs or baggage carts) and other maintenance vehicles to ZEV alternatives, and as such, adequate on-airport electric charging stations are required to transition their vehicle fleet.

Additionally, GA airports are expected to be primary locations for AAM operations. AAM aircraft consist of battery powered, vertical or short take-off and landing aircraft (eVTOLs/sTOLs). AAM provides a new mode of transportation, for trips up to 150 miles, that is cleaner, faster, or more energy-efficient than conventional ground transportation. This new form of transportation can reduce reliance on traditional engine aircraft and if deployed at scale, alleviate congestion on roadways, reducing overall carbon emissions.

(l) Renewable Energy Microgrid System. Procurement and installation of an airport electric grid system, or its components, that operates on renewable energy and any capital improvements necessary for its installation or operation.

Airports provide key emergency services for communities including supporting fire-fighting operations, providing staging areas, and for critical evacuation operations. These airports benefit from improved energy infrastructure to be able to maintain regular and emergency operations during energy grid disruptions. This need has only increased due to the impacts of climate change.

Local clean energy sources such as solar farms and supporting electric microgrids can provide numerous benefits to airports, enhancing their energy resilience, reducing costs, and improving sustainability.

- **Energy Resilience:** Microgrids offer enhanced energy resilience by creating a localized and self-sufficient energy system. They can operate independently from the main power grid, ensuring a continuous power supply during grid outages or disruptions. This is particularly crucial for airports, as uninterrupted power is essential for critical operations such as air traffic control, security systems, lighting, and communications, especially during emergency operations.
- **Demand Response and Load Management:** Microgrids allow airports to optimize their energy consumption through demand response programs and load management strategies. By monitoring energy usage in real-time, microgrids enable airports to adjust their electricity demand during peak periods, reducing strain on the grid and potentially lowering energy costs through time-of-use pricing.
- **Environmental Sustainability:** Microgrids support airports in achieving their sustainability goals by promoting the integration of renewable energy sources. By generating clean energy on-site, airports can reduce their carbon footprint and contribute to mitigating climate change. Microgrids also enable the integration of energy storage systems, allowing airports to store excess renewable energy for use during periods of high demand or when renewable generation is low.

- Integration of Electric Vehicles and Aircraft: Microgrids can facilitate the integration of electric vehicle and aircraft charging infrastructure at airports. By coordinating electric charging use with the microgrid's energy management system, airports can optimize charging patterns, balance electricity demand, and support the transition to cleaner transportation.

Overall, microgrids offer airports greater control, resilience, and sustainability in their energy supply. They provide opportunities for cost savings, carbon reduction, and improves safety and resiliency of vulnerable communities that these airports serve.

(m) Educational Facilities and Equipment. Capital improvements necessary to provide facilities for community outreach, aviation education programs, and procurement of aviation training equipment such as small unmanned aircraft systems, flight simulators, and similar devices, to be used for community outreach and educational purposes.

The current aviation workforce is aging, and employment opportunities are outstripping a ready workforce in many aviation sectors. The industry faces a chronic shortage of pilots and there are increasing needs for workers in aviation maintenance, manufacturing, planning, and research and engineering. In 2020, pilots and flight engineers reported a median age of 44.8 years. In addition, women and minority workers are still greatly under-represented in aviation.

New aviation technology such as Advanced Air Mobility, electric aircraft, and drones, present new opportunities to renew public interest in aviation. Some of California's airport sponsors currently host community outreach and youth educational programs at their airports. Such after-school or summer programs could offer introductory flight instruction, drone operation certification, aircraft rides and other activities that introduce students to aviation careers and provide mentorship opportunities.

This regulation change will open the door for General Aviation airport sponsors to invest in the equipment and facilities necessary to develop successful programs. Once regulations are updated, a funding prioritization policy will help ensure equity considerations are incorporated as well.

(n) Fueling Facilities and Equipment. Conversion, upgrade, or replacement of existing fueling facilities and equipment necessary to provide unleaded aviation gasoline, sustainable aviation fuels, or to comply with regulatory requirements.

All General Aviation piston engine aircraft run on 100 Octane Low Lead Aviation Gasoline (AvGas 100 LL) fuel. AvGas100 LL contains tetraethyl lead (TEL), which is an additive used to prevent engine damage and possible malfunction during flight. However, the combustion of 100 LL AvGas releases lead compounds into the atmosphere. There have been multiple efforts underway to reformulate aviation gasoline to remove lead while offering the same engine protection for the existing aircraft as leaded fuel. The Federal Aviation Administration (FAA), as part of its Eliminate Aviation Gasoline Lead Emissions (EAGLE) initiative, has been funding research into unleaded fuels acceptable for safe piston engine aircraft with the goal of eliminating leaded aviation fuels in piston-engine aircraft by the end of 2030. In September 2022, the FAA approved the first 100-octane unleaded fuel reformulation (G100UL).

Turbine aircraft engines currently rely on kerosene-based Jet Aviation Fuel (Jet-A). Sustainable aviation fuels (SAFs), produced from grains, seeds, or other organic renewable material, are now available and are being used for some commercial aircraft operations. SAFs are currently blended with Jet-A fuel in blends up to 50-50 blends with the goal to increase the formulation toward a goal of 100 percent reliance on SAFs and divestment from Jet-A.

SAFs help reduce carbon emissions in other ways than they are sourced from renewable material. SAFs have an overall smaller carbon footprint in their production as they have lower carbon content and are utilized more efficiently

than Jet-A fuel during combustion. The CARB Scoping Plan has set a goal to have SAFs meet “most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries” by 2045.

As such, California airports are looking to upgrade or replace their existing fuel storage and delivery systems to provide cleaner fuels.

(o) Helipads. Construction or reconstruction of helipads for helicopters or other vertical take-off and landing aircraft, and associated grading and drainage improvements.

(p) Airport improvements and equipment for emergency services. Airport improvements or equipment purchases, not listed elsewhere in regulations, that are necessary for an airport to provide emergency support for the community, including, but not limited to, supporting wildfire suppression, natural disaster response and recovery, and medical transport.

One third of the California land mass is forested and thereby susceptible to wildfires. Firefighting responsibilities are shared between United States Forest Service and the Department of Forestry and Fire Protection (CalFire). USFS is responsible for forest fire protection on Federal land while CalFire’s responsibility is protecting State and privately-owned forests. CalFire employs around 4,000 permanent and 2,500 seasonal firefighters and operates an aerial fire-fighting program. According to the Cal-Fire website, “Cal Fire has its own fleet of aircraft operating from 12 airfields and 10 helicopter bases across the state that can reach most fires within about 20 minutes. The three main components of the fleet are tactical planes, airtankers and helicopters. All have specific roles but work together as a unit to combat fires.” USFS has about 3,700 permanent and temporary employees working on fire-fighting activities in the pacific southwest and run their own aviation program as well.

Both USFS and CalFire rely on airports in California to house their fleets and act as bases of operation. While both agencies invest in airport infrastructure to meet their needs, the significant increase in the severity of wildfires have daylighted some infrastructure and equipment gaps at airports, that may that should be addressed by regulations. One example of a gap is Nevada County airport, which had to rely on a loan from Caltrans for a fueling truck that now serves as the only source of reliable fuel for Cal-Fire aircraft at that airport. Another gap is having dedicated helipads and other staging areas for firefighting helicopters that make launch, land, refueling and water bucket fill-up faster and safer than using the existing runway. Additional infrastructure can also help establish incident command posts at the airport to manage resources, logistics, and communication among responding teams, or provide needed space to temporarily shelter personnel, evacuees, or provide storage space for supplies.

Helipads are also necessary infrastructure to launch and land eVTOL aircraft and allow communities to realize the benefits Advanced Air Mobility.

Technical, Theoretical, or Empirical Studies, Reports, or Documents if Any Relied Upon

[Future Of Work in California - A New Social Compact for Work and Workers](#)

[California Zero-Emission Vehicle Market Development Strategy](#)

[Driving the Future: Autonomous Vehicles Strategic Framework -Vision and Guiding Principles](#)

[CAPTI - Climate Action Plan for Transportation Infrastructure](#)

[The Economic Impact of Civil Aviation on the U.S. Economy State Supplement](#)

[U.S. Bureau of Labor Statistics, 2022 Labor Force Statistics from the Current Population Survey](#)

[2022 Scoping Plan for Achieving Carbon Neutrality](#)

[Deloitte Insights - Advanced Air Mobility - Can the United States afford to lose this race \(Jan 2021\)](#)

[CalFire Aviation Program Fact Sheet](#)

Benefits From Regulation Amendment

This regulation amendment increases options for GA airports to apply for grant funds that will allow for the operation of zero-emission vehicles and aircraft, facilitate the removal of lead and the lowering of carbon emissions from aviation fuels, increase community aviation educational access, and create a local clean energy source for the airport. As such, this regulation amendment opens opportunities for project requests that benefit safety, equity, sustainability, community health, and climate resilience.

This regulation amendment is aligned with, and further promotes, the purpose of the SAA ([Section 21002](#)) and puts California one step ahead in pursuing a low-carbon aviation transportation sector.

Reasonable Alternatives to the Regulation

No reasonable alternatives to the regulations have been identified.

Economic Impact on California Business Enterprises

No adverse impacts on California business enterprises, including small businesses, have been identified by this regulations update.

This proposal does not impact grant program funding levels. Should dedicated funding be made available, Caltrans concludes that it is: (1) unlikely that the proposal will eliminate any jobs, (2) likely that the proposal will create an unknown number of jobs for businesses, (3) likely that the proposal will create an unknown number of new businesses, (4) unlikely that the proposal will eliminate

any existing businesses, and (5) likely that the proposal will result in the expansion of businesses currently doing business within the state. The extent of economic benefits would depend on the amount of funding.

Reasonable Alternatives to the Regulation That Would Lessen Adverse Impact on Small Business

Not applicable.

Imposition Of Unnecessary or Unreasonable Regulations or Reporting, Recordkeeping, or Compliance Requirements

None. Should sponsoring local agencies receive state grants for these additional allowable categories, they will be subject to the same reporting, record-keeping, and compliance requirements per the A&D grant assurance requirements set in SAA and associated regulations. The proposed amendment does not create any additional local mandate.

Facts, Evidence, and Testimony to Support Determination of No Economic Impact on Business

Public spending on infrastructure and career development opportunities provides direct and indirect economic benefits. Clean energy infrastructure spending provides an economic stimulus for construction, manufacturing, and transportation sectors. Improving infrastructure used by emergency responders and advancing cleaner energy sources contribute to public safety and community resiliency and health, all of which provide economic benefits or mitigate economic harm to local economies. Aviation educational programs open new career paths for youth, helping them compete for better-paying technical jobs in design, operation, and maintenance and provides airlines and other aviation related businesses a larger and better-equipped workforce.