



Overview

This document compiles **Sustainable Aviation Fuel (SAF) Business Development Impact and Opportunities** based upon a series of initial interviews with producers that are part of SFO's Stakeholder Working Group. This resource was prepared for and submitted to the California Governor's Office of Business and Economic Development in response to a request for more information and contains the following:

1. [California's Aviation Market: Economic Benefits & Assets](#)
2. [SAF Industry Economic Development Benefits](#)
3. [Fossil-to-Clean Aviation Economic Transition Opportunities](#)

1. California's Aviation Market: Economic Benefits & Assets

In 2019, California's 27 Commercial Service Airports employed over 1.1 million people who served over 200 million passengers and handled over 5.2 million tons of air cargo. These aviation activities required the uplift of over 4 billion gallons of jet fuel. An annual summary of California's Aviation Industry passenger and air cargo services, economic impact, and general aviation fuel sales are highlighted by this [CalTrans Division of Aeronautics Fact Sheet](#).

2. SAF Industry Economic Development Benefits

The following provides a summary of economic development analyses conducted for SAF Production Facilities operating in California and under construction outside of California, including:

- [World Energy Altair](#) Plant -
 - Context: World Energy is actively working to convert its Paramount, CA refinery's 66-acre complex's capacity to 350 million gallons of renewable jet fuel per year from the current 45 million gallons per year; the project is expected to be completed in 2023.
 - \$15.2 billion impact on US economy (\$7.76 billion in CA) between 2019-2024
 - Over 16,300 jobs in the US (nearly 5,800 in CA)
 - \$1.3 billion direct capital investment (\$620 million in CA)
- [Fulcrum Sierra Biofuels](#) Plant- DAR Application accessible [here](#)
 - Context: *The Plant located in Storey County, Nevada, will process approximately 175,000 tons of MSW feedstock annually, creating 11 million gallons per year of renewable synthetic crude oil, or "syncrude," that will be processed by Marathon Petroleum into transportation fuel in early 2021.*



- Requested: *Sales Tax Abatement, Modified Business Tax Abatement, Personal Property Tax Abatement, Real Property Tax Abatement*: Value \$1,909.038
- Investment Capital: \$280M for 65,000 sq.ft. feedstock-processing facility (see [RGJ article](#))
- Total Jobs Supported: 59; Construction: 134
- Local/State Tax Revenue (Direct + Indirect): \$2,71,926

- [Red Rock Biofuels Plant](#) - Economic Study prepared by Business Oregon (attached)
 - *Context: The 43,560 sq.ft. Plant, located in Lakewood, OR, will convert approximately 166,000 dry tons of waste woody biomass into 16.1 million gallons/year of low-carbon, renewable jet and diesel fuels. This plant, scheduled to open in the Spring of 2021, is half the size of future plants, so the economic development potential for these plants are anticipated to be higher/double.*
 - Job Creation and Labor Income:
 - Operations:
 - Total Jobs Supported: 44; \$3.2M
 - Indirect/Induced: 215; \$13.1M
 - Construction:
 - Total Jobs Supported: 565 over 2 years; \$84.3
 - Indirect/Induced: 547; \$27.4M
 - Benefits to the state:
 - Operations: \$590,723 state personal income taxes
 - Construction: \$5,365,810 state personal income taxes

3. Fossil-to-Clean Aviation Economic Transition Opportunities

The following economic opportunities were shared by producers as ideas on how to help elevate and secure California's competitiveness and innovation in growing the only viable industry that can decarbonize aviation. If modeled here, the state's fossil-to-clean economic transition pathway will create new economic and stable employment opportunities for California and its workforce. Key strategies include:

A. Establish a customized, clear pathway to navigate and streamline permitting that:

- Launches first through efficient pre-application meetings – example: NV Economic Development Incentive Application [here](#).
- Forms interagency partnerships, coordinates agency reviews, sets joint-agency working groups, publishes model agency decisions as outlined in the CEC Best Permitting Practices Guidelines for Liquid Transportation Fuels Infrastructure (attached; living example – [Oregon Regional Solutions](#))



[Team](#)/Centers - Governor's Office brokering, guiding, assisting across Department of State Lands, Historical Preservation, Environmental Quality, Municipal Government Partners).

- Leverages models for prior solid waste and fuel production facilities (example: [Nevada Governor's Office of Economic Development](#)) and minimizes Leg/Reg onboarding.
- Narrows analyses and submittals – examples from the [Indiana Economic Development Corporation](#) include:
 - Waiver from Point-Source Emissions Model for Minor Source Air Permit.
 - Waiver from remodeling/resubmitting new permit for replacing equipment.
- Expedites permitting requiring multi-agency review– example from Oregon Department of Environmental Quality using [Lean Kaizen](#).
- Prioritizes and expedites review of permit applications for SAF production facilities (construction permit navigation across air, wetlands).
- Provides a clear and firm timeframe for review of all permits and CEQA (definition of lead agency, coordination between city/AQMD) and prioritization for low-carbon industries.

B. Broaden eligibility criteria of state grants to allow for SAF competitiveness – initial list for a future, and deeper, analysis include:

- Low Carbon Transportation Investments and Air Quality Improvement Program (AQIP)
- Carl Moyer Memorial Air Quality Standards Attainment Program (BAAQMD)
- Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP - CEC)
- Greenhouse Gas Emissions Reduction Fund (CalEPA)
- California Forest Improvement Program (CalFire)

C. Create CA SAF Tax Incentives/Abatements:

- Sales Tax Exemption on equipment brought into state – example OR, CA ethanol plants
- Tax Exempt Enterprise Zones – example: OR - 5 years urban projects or 15 years for rural
- Tax Exempt Economic Development Bonds - example: [Nevada \\$150M](#)

D. Analyze and address additional industry barriers to entry – key target: biomass feedstocks:

- Create new in-state biomass subsidies - BCAP (OR [Biomass Crop Assistance Program](#)) - can be customized, specified for feedstocks
- Socialize SAF as a wood waste end market via the California Forest Stewardship Program, Regions Rise, California Forward and update the CA Forest Stewardship Plan accordingly – example: [Lakeview Stewardship Group](#).
- **Lobby for Renewable Fuel Standard that allows for the harvesting of federal biomass or grow LCFS to account for the LCA co-benefit of wildfire risk reduction.**