

# SFO Clean Vehicle Fact Sheet

Updated April 2021

## Clean Vehicle Policy

San Francisco International Airport adopted a Clean Vehicle Policy in February 2000. The policy strongly encourages the replacement of gasoline and diesel vehicles with clean air vehicles powered by alternative fuels like electricity and renewable compressed natural gas (RCNG). In sectors where manufacturers have offered competitive alternative fuel vehicles and products, the Policy's goal of 100% clean air vehicles in Airport and Airport-permitted fleets has been met. Ground transportation sectors operating virtually 100% clean air vehicles include BART, Airtrain, on-Airport shuttle buses, hotel and parking courtesy shuttles, and San Francisco city taxis.

The Airport uses financial and nonfinancial incentives to encourage alternative fuel use and consolidation of courtesy shuttle services. The Airport hosts two of the largest public RCNG fueling stations in Northern California.

## Greening the Airfield

SFO's Clean Vehicle Policy extends to airfield vehicles. Airlines started acquiring electric aircraft ground service equipment (GSE) decades ago. Now, some 700 pure electric vehicles are in service, amounting to 30% of all tenant-operated airfield vehicles. New Terminal 1 and existing Terminals 2 and 3-East feature Airport-supplied electric GSE chargers serving all gates. SFO will provide airfield chargers at all terminals when they are rebuilt, or sooner.

## AirTrain and BART

SFO operates AirTrain, an automated people mover linking the Airport's terminals, parking garages and Rental Car Center. AirTrain replaced the airport's diesel-powered rental car shuttle buses, which operated 600 round trips per day. Powered by clean hydro-electricity, AirTrain eliminates all emissions for a service used by one in six Airport customers. BART, the near-zero-emission regional electric rail system, operates direct to the International Terminal. It carries 8% of air passengers and numerous employees. Almost 25% of air passengers traveling to and from the East Bay use BART.

## Hybrid-Electric Vehicles

SFO was the first U.S. airport that incentivized rental car companies to offer their customers the very cleanest automobiles, through rent offsets and motorist offers. By City ordinance, San Francisco taxicab companies were required to reduce greenhouse gas emissions by almost 50% per cab from 1990 levels. As a result, most City cabs are now hybrid-electric models. Even limousine operators run hybrid and even plug-in electric vehicles, a requirement for linking to the Airport's website.

## Plug-In Electric Vehicles

The Airport has equipped each public garage with smart chargers so owners of electric plug-in vehicles (EVs) can recharge easily. Many EV stalls are conveniently located near elevator cores. With the opening of the new Long-Term Parking Garage, SFO has approximately 270 public parking stalls with access to electric outlets, plus 115 employee spaces. SFO enthusiastically embraces electric vehicles. Our own light-duty vehicle fleet will be almost 75% electric by 2023. Our full-time landside bus fleet should be all-electric by 2027, supplementing the Airtrain electric rail system that is currently being extended. We encourage courtesy shuttle operators to consider electric shuttles after researching operational and infrastructure needs. We also support the acquisition of plug-in electric vehicles by Uber and Lyft drivers.

## Renewable Compressed Natural Gas (CNG)

About 400 buses, vans, and autos run on renewable compressed natural gas (RCNG) at SFO. At the Airport's two large RCNG refueling stations, pipeline gas is compressed to 4,500 pounds per square inch for delivery to 15 fast fill hoses. Two private operators, Trillium USA and Clean Energy, offer on-Airport refueling services. SFO's renewable CNG is currently derived from landfill methane. Associated greenhouse gas emissions average 70% below conventional gasoline or diesel, after compensating for production and transport.

## Electric Buses

In September 2020, SFO deployed six 40-foot all-electric zero-emission buses and related electric vehicle charging infrastructure. These six all-electric buses replace six renewable diesel buses in the regular operating fleet and will result in the elimination of more than 23.7 million pounds of greenhouse gas tailpipe emissions over the lifetime of these vehicles, supporting SFO's Strategic Plan Goal to achieve carbon neutrality by 2021. SFO expects to purchase additional all-electric buses to replace existing CNG buses for a greener modern fleet.

## Renewable Diesel and Jet Fuel

San Francisco city departments, including the Airport, use only 100% renewable diesel derived from animal or plant sources. Marin Airporter's highway coaches are powered by renewable diesel. Even planes departing SFO use a small percentage of renewable jet fuel thanks to the efforts of a team of airport and industry representatives convened by the Airport Commission.

## Hydrogen

SFO partnered with Sandia National Laboratories to introduce the first hydrogen-powered, high intensity mobile light fixtures at any airport. The units are quiet and emission-free in the field. We'll look for other opportunities to use hydrogen as a primary or auxiliary power source.

## Clean Vehicle Count

Over 3,500 RCNG, electric, hydrogen, and renewable diesel vehicles are in operation at SFO:

- 40 transit and airfield buses (electric, RCNG, renewable diesel)
- 23 highway coaches (renewable diesel)
- 125 minibuses (RCNG, 2 plug-in electrics)
- 83 vans (RCNG)
- 1,000 taxicabs (hybrid-electric)
- 106 limousines (77 hybrid-electric, 29 plug-in electric)
- Estimated 1,000 rental cars (mostly hybrid-electric)
- 700 airfield tenant vehicles (plug-in electric)
- 170 AirTrain and peak-period BART cars serving SFO (electric)
- 354 staff and utility vehicles (161 CNG, 21 plug-in electric, 50 hybrid-electric, 122 renewable diesel)

## CNG Station Statistics

Current annual CNG demand: 1.8 million gasoline gallons equivalent (gge)

Estimated CNG demand by operator type: 31% hotel and off-Airport parking courtesy shuttles, 29% SFO Shuttle, 13% shared-ride and pre-arranged vans, 1% airline crew shuttles, 1% Airport Auto Shop vehicles, 25% non-Airport vehicles