

## Fact Sheet

### **SFO's Clean Vehicle Policy: 10<sup>th</sup> Anniversary 2000 - 2010**

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 compressed natural gas (CNG), electricity, and propane. Where manufacturers offer competitive alternative fuel products, the policy sets a goal of 100% clean air vehicles in Airport and Airport-permitted fleets by 2012.

SFO is achieving the clean vehicle transition in several ways. The Airport has secured \$12 million in vehicle acquisition incentives from the Bay Area Air Quality Management District, Metropolitan Transportation Commission, and San Francisco County Transportation Authority for vehicles operating to and from the Airport. SFO has also obtained \$4 million for airfield vehicles and infrastructure, on-Airport shuttles, Airport utility vehicles, and an advanced hydrogen vehicle refueling station from Federal and State agencies including the Federal Aviation Administration, Environmental Protection Agency, and California Air Resources Board.

The Airport uses financial and nonfinancial incentives to encourage alternative fuel use by fleet operators, including preferential trip fees for courtesy shuttles, and "head of the line" privileges for CNG taxicabs. In addition, incentives for hotel courtesy vehicle trip reduction have reduced miles traveled by one third. The Airport hosts two of the largest public CNG fueling stations in Northern California.

#### **Greening the Airfield**

SFO's Clean Vehicle Policy extends to airfield vehicles. The move to electrify aircraft ground service equipment (GSE) started more than a decade ago. Now, some 400 pure electric vehicles, 75 low-emission propane vehicles, and a growing number of clean diesel vehicles are in service. By 2012, well over half the GSE fleet will use clean power, up more than 40% in a decade. Terminal 2, which SFO is currently renovating, will feature sufficient Airport-supplied electric chargers for all GSE needs.

#### **AirTrain/BART**

SFO operates AirTrain, an automated people mover linking the Airport's terminals, terminal parking garages and rental car center. AirTrain replaced the airport's diesel-powered rental car shuttle buses, which ran 600 round trips per day. Powered by clean hydro electricity, AirTrain eliminates all emissions for a service used by almost 20% of Airport customers. BART, the near-zero-emission regional electric rail system, operates direct to the International Terminal. It carries 10% of air passengers and numerous employees. Almost 30% of air passengers originating in the East Bay use BART to get to SFO.

#### **Compressed Natural Gas (CNG)**

Almost 500 SFO-permitted buses, vans, taxis, and autos run on Compressed Natural Gas (CNG). At the Airport's two large CNG 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, provide on-Airport refueling services.

## **Hybrid-Electric Vehicles**

SFO is the first airport in the country to incentivize customers to rent the lowest emission hybrid-electric vehicles. An automatic \$15 credit is applied to the customer's bill. Rental fleets offer many hybrids because the companies also realize a savings on rent payable to the Airport if they meet Airport goals. By ordinance, San Francisco taxicab companies are required to reduce greenhouse gas emissions by an average of almost 50% per cab by 2012. To comply, taxicab companies are acquiring hundreds of hybrid-electric vehicles.

## **Electric Plug-In Vehicles**

In conjunction with the City and County of San Francisco, the Airport has equipped each public garage with electric outlets so owners of plug-in electric cars can recharge easily. The Airport's own fleet already includes 25 neighborhood electric utility vehicles for low-speed on-airport needs.

## **Hydrogen and Hydrogen Blend Vehicles**

In partnership with advanced fueling providers, the California Air Resources Board, and the Bay Area Air Quality Management District, SFO is building one of the largest hydrogen vehicle fueling complexes in Northern California. Virtually emissions-free hydrogen, in a 20% blend with CNG—Hythane—will power hotel and parking lot courtesy shuttles. Pure hydrogen will supply advanced prototype fuel cell autos and buses. It will also be used in airfield applications such as mobile lighting - replacing diesel generators – and could supply auxiliary power for aircraft.

## **Diesel Vehicle Filters and Rebuilds**

Major charter bus and scheduled airporter operators, and the on-Airport shuttle bus operator are installing the most advanced particulate filters available on 150 diesel vehicles serving SFO. The filters will reduce lung-affecting fine particle emissions by 97%, and nitrous oxides by 85%. On the airfield, airlines such as Southwest are completely rebuilding diesel-powered ground support equipment with the cleanest available engines.

## **Biodiesel**

San Francisco's Department of the Environment credits SFO with being the first city department to run all its own diesel vehicles on a 20% biodiesel blend. This includes all 12 remaining diesel buses shuttling employees and passengers within the Airport.

## **Clean Vehicle Count**

Over 2,250 electric, CNG, propane, biodiesel, and advanced diesel vehicles are in operation at SFO:

- 75 highway coaches (filtered diesel)
- 23 transit buses (CNG, filtered diesel)
- 150 minibuses (CNG, filtered diesel)
- 80 vans (CNG)
- 750 taxicabs (CNG, hybrid-electric)
- 20 limousines (hybrid-electric)
- 200 rental cars (hybrid-electric)
- 500 airfield vehicles (electric, propane, rebuilt diesel)
- 130 BART, AirTrain rail cars (electric)
- 324 staff and utility vehicles (103 CNG, 25 pure electric, 20 hybrid-electric, 176 B20 biodiesel of which 20 also have diesel particulate filters)

## **CNG Station Statistics**

Current annual CNG demand: 1,500,000 gasoline gallons equivalent (gge)

CNG fuel demand by operator type: 24% taxicabs, 23% hotel courtesy shuttles, 19% off-Airport parking shuttles, 10% door-to-door vans, 9% Airport shuttles and staff vehicles, 4% airline crew shuttles, 2% charter vehicles, and 9% other vehicles—chiefly nearby municipal and private fleets.