CASE STUDY 14

Air quality high on the agenda at Oakland International Airport

Who: Oakland International Airport (OAK)
Where: United States of America
What: Alternative fuels and sources of energy
When: Ongoing
Why: Ensuring local air quality standards and reducing emissions

Airside

Major improvements to the electrical supply at the airport have been made, with improvements including:

- Ground power: All aircraft gates are equipped with a 400 Hz power supply. Therefore, aircraft do not need to use jet fuel to generate electricity.
- Pre-conditioned air: Electric powered air conditioning units have been provided for jetways and aircraft. This eliminates the use of jet fuel or portable diesel units for air conditioning. *Current status: Installed at 25% of Terminal 1 gates and all gates in Terminal 2. Will be installed at remaining Terminal 1 gates as jetways are upgraded.*
- Ground Support Equipment (GSE): Replace diesel- and gasoline-powered vehicles used for towing and servicing aircraft with alternative-fuel vehicles. *Current status: GSE power offered at seven gates in new Terminal 2 concourse and adequate power available at remaining Terminal 2 gates. A new substation will be constructed to supply power for electric GSE at all Terminal 1 gates. By June 2008, a plan will be discussed with each airline and cargo handler for conversion to electric GSE.*

Solar power

An installation of photovoltaic solar power by cargo carrier FedEx generates 80% of the electric power at their facility. The Port of Oakland is installing a photovoltaic array at OAK that will generate about one megawatt of electricity for the airport.

Landside

A Compressed Natural Gas (CNG) filling station at North Field opened in 2002. CNG volumes have increased from 106,000 gasoline gallon equivalents in 2002 to 720,000 in 2006.

Ground transportation ordinances were amended to require 50% alternative fuel vehicles (typically CNG) for those companies with more than one vehicle, such as taxi and shuttle operators. Current status:

- 65% of taxis operating at the airport are now GNG fueled;
- Nearly half of all door-to-door shuttle vans are CNG;
- Approximately 20% of off-airport parking shuttles are CNG, with four more added in 2006;
- 43% of Port shuttle buses are now run on CNG;
- Grant money has been secured for the replacement of five AirBART shuttle buses with CNG; and
- Rental Car concessions agreement requires replacement of a further 18 shuttle buses with CNG

Incentives

Since the inception of a regional air quality partner vehicle incentive programme (VIP) in 1999, the Port has been both a sponsor and recipient of VIP grants. Over $300,000 has assisted ground transportation operators and the Port in purchasing 99 CNG or hybrid vehicles

Electric vehicle recharging units are located in 50% of OAK's parking lots. In partnership with Electric Power Research Institute and Pacific Gas and Electric, the Port will expand as demand indicates.

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Company profile:
For more than 80 years, Oakland International Airport (OAK) has been an important part of the San Francisco Bay area. The airport complex and other OAK-related aviation businesses employ 8,000 people, of which roughly one-third are in jobs related to cargo.

The original airport at North Field was built in 1927 and is still in operation today for air cargo, general aviation and corporate jet activities. Commercial passenger and cargo jet aircraft operate from South Field, which opened in 1962.

The airport is a thriving business, handling around 14.5 million passengers and nearly 668,000 metric tonnes of air cargo in 2006.

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