

Greenhouse Gas Emissions Inventory Fact Sheet

Greenhouse Gas Emissions Summary for Local, Regional, and Worldwide Tracking [For Sea-Tac Airport Activity (2006)]

	Metric tons CO2/year	Percent of total
Port of Seattle owned/controlled	243,203	4.8%
On-Airport Total Emissions <i>[this includes POS, hotel/shuttles, passenger vehicle on-airport, aircraft approach, takeoff, taxi and ground support vehicles]</i>	641,000 approx.	12.5%
Total Regional Emissions <i>[this includes on airport emissions plus emissions from vehicles driving to and from airport]</i>	1.2 million approx.	24%
Aircraft Cruise Altitude Emissions <i>[this includes aircraft emissions above 3,000 feet to its destination and beyond, until fuel loaded at Sea-Tac is completely burned off]</i>	3.8 million approx.	76%
Worldwide Emissions <i>[includes all activities associated with Sea-Tac worldwide, including eventual burning of fuel to an aircraft's destination and beyond, until fuel loaded at Sea-Tac is completely burned off]</i>	5.09 million approx.	100%

Current Sea-Tac Airport Greenhouse Gas Reduction Programs

- **Ramp Control Tower** – established to increase efficiency of aircraft handling during taxiing to gates. For every one minute reduction of taxiing time, an airline operating a Boeing 737 saves almost four gallons of fuel – a Boeing 747 will reduce jet fuel consumption by 15 gallons in that same four minute period.
- **Gate electrification** – this provide airlines the option to power their on-aircraft electrical needs (lighting, instruments, etc.) at nearly all Sea-Tac gates. The emission savings on average is nearly 20 pounds of CO2 for every one minute of gate electricity used.
- **Electric Ground Support Equipment** – using electric pushback tractors to move aircraft away from gates saves about 150 pounds of CO2 per day, versus using traditional diesel tractors.
- **Underground fuel hydrant system** – jet fuel is delivered directly to the gate via an underground system, eliminating the need to have diesel-powered trucks deliver fuel to aircraft.
- **Compressed Natural Gas (CNG) fueling station** – The Port partnered with Clean Energy to build the first large CNG fueling station open to the public in Washington.
- **CNG powered vehicles** – Port operations reduce air emissions by using 16 buses, two sweepers and 60 light-duty vehicles powered by natural gas.
- **CNG powered taxis** – in 2007, all taxis serving Sea-Tac were converted to natural gas. And, 25 hybrid Toyota Prius models are now in service, as part of a pilot program.
- **Over the past five years, energy consumption has been reduced** by 25% per square foot through lighting retrofits, providing 300% more light while using 50% less energy.
- **Since October 2006, 25% of electrical power purchased for the airport** is in the form of Renewable Energy Credits or “green power.”

Future / Proposed Projects to Reduce Greenhouse Gas Emissions

Pre-Conditioned Air

The Port is pursuing the opportunity to provide pre-conditioned air supplies at airline gates to reduce the need for on-board power generation. If fully implemented, this project alone could help reduce airport related Greenhouse Gas emissions by nearly 40,000 tons of CO₂ annually. In conjunction with gate electrification, pre-conditioned air will allow an airplane to completely eliminate the need for jet turbine use while at the gate.

Hotel Shuttle Consolidation

The Port is partnering with local hotels to reduce the 480,000 trips from off-site locations to the airport by hotel and courtesy van shuttles. Consolidation is estimated to result in a 30-50% reduction, or more than 150,000 trips.

Electrification of Ground Access Vehicles

By implementing the use of electric pushback tractors for moving aircraft away from their gates, each electric unit is saving about 150 pounds of CO₂ per day from being emitted. A comparable 150 pounds daily savings of CO₂ is also seen with the conversion of diesel to electric powered baggage tractors.

Overview – Seattle-Tacoma International Airport

Sea-Tac Airport is the primary air transportation hub of Washington State and the Northwestern United States. Ranked as the 17th busiest airport in the U.S., Sea-Tac serves non-stop 74 domestic and 19 international destinations. Approximately 73% of the travelers using the Airport are origin & destination passengers, meaning they begin or end their trip at Sea-Tac Airport; the remaining passengers are on connecting flights. In 2007, Sea-Tac set a record for most passengers served during one year – more than 31.3 million.