

Appendix Q

Hartsfield-Jackson Atlanta International Airport Reduction in Emissions of Ozone Precursors

The Hartsfield-Jackson Atlanta International Airport (HJAIA) is one of the world's busiest airports, and a source of emissions of ozone precursors in the Atlanta metro area. The purpose of this section is to inform the reader about the steps being taken by HJAIA to minimize emissions of ozone precursors in light of the fact that the activity generating the emissions is not expected to decrease. Georgia EPD does not have authority to impose equipment specific emission standards or operational standards due to federal preemption law. Therefore, minimization of emissions at HJAIA must take place on a voluntary basis as well as be an inherent portion of future HJAIA facility management plans.

According to the National Resources Defense Council,

Air pollution totals from automobiles and many major industries have stabilized or decreased with time while aircraft continue to emit more and more ground-level ozone precursors....Although airports are major emitters of VOC and NOx, they are not regulated like other significant air pollution sources. While the Clean Air Act Amendments of 1990 effectively targeted motor vehicles and industrial sources for emissions reductions, it left state and local officials essentially unable to control air pollution from an airport's planes. [NRDC pages 36-37].

Sources of emissions of ozone precursors include aircraft, auxiliary power units (APUs), ground support equipment (GSE), passenger-related motor vehicles, construction, deicing, aircraft refueling, engine testing, fire training, boilers, generators, fuel storage tanks, and emergency generators. Figures Q.1 and Q.2 illustrate the relationship of emissions from HJAIA with other emitting activities in the metro Atlanta region.

Figure Q.1 2005 Actual NOx Emissions (tons per year)

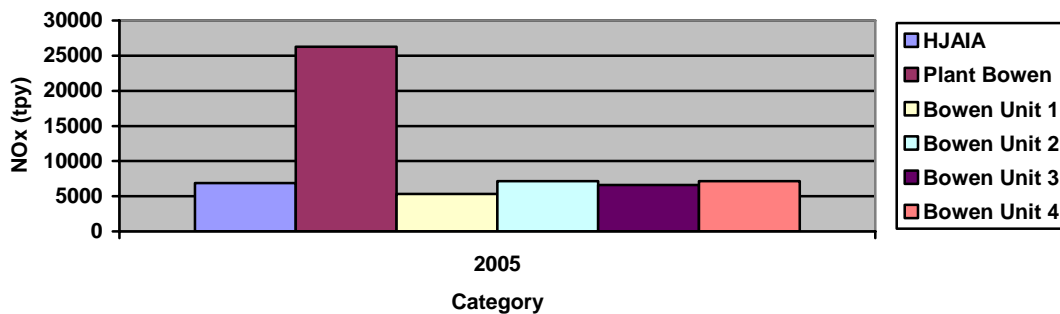
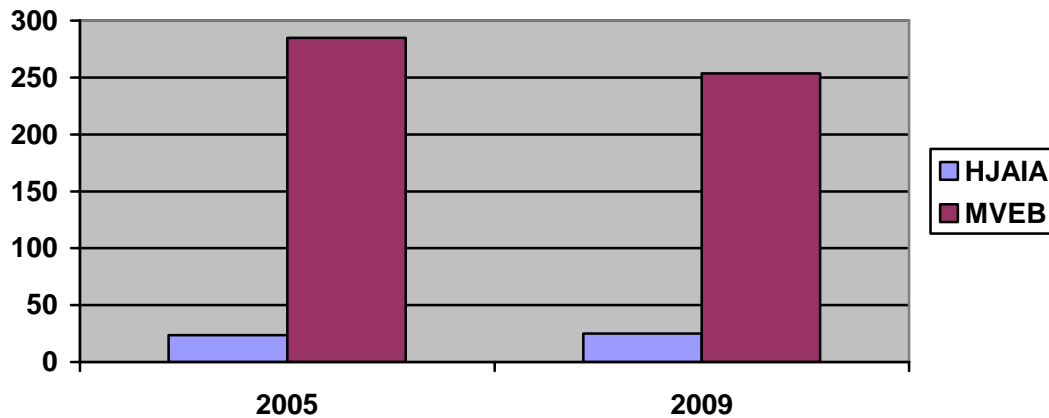


Figure Q.2 Relationship Between HJAIA and Motor Vehicle Emissions Budget for Metro Atlanta Region NOx Emissions (tons per summer day)



HJAIA has undertaken the following projects to either reduce negative environmental effects associated with operating the airport or that will enhance customer service and provide an environmental benefit.

MARTA Heavy Rail Airport Station: Ridership through the MARTA Airport Station has steadily increased during the last few years. MARTA rail access to the airport has become extremely important for reducing passenger vehicle trips to the airport. The station has also played a key role in ensuring that some of the lower-wage airport employees have reliable transportation to and from work.

Delta Air Lines MARTA Airport Station Ticket Counters: One reason more Delta passengers are taking the train to the airport centers on the availability of ticket counters in the MARTA station. The ticket counters' availability means that passengers are not required to carry their baggage to the Delta ticket counters located at the east end of the terminal. Providing passengers this option makes riding the train a more viable option for passengers with luggage and helps reduce vehicle trips to the airport.

Terminal Area Roadway Improvements: Some segments of the terminal area roads, the Ground Transportation Center, and access to the parking decks were upgraded. These upgrades have resulted in traffic that flows more freely, reducing congestion on the curbfront and in the Ground Transportation Center, which produces fewer emissions.

Parking Information Available on Radio Station and Airport Web Site: The Department of Aviation operates a radio station (830 AM) that provides real-time airport status information, including parking lot availability. This same information is available on the airport web site, atlanta-airport.com. The web site has been quite successful, logging over 138,000 hits in some months. Providing this information to passengers inbound to the airport prior to reaching it allows passengers to plan which lot they will

use, reducing the number of passengers circling the terminal area roads looking for an available lot and space.

Local and Intercity Bus Service: The Department of Aviation strongly believes in ensuring that HJAIA maximizes its ability to serve as an intermodal facility, giving airport users the opportunity to use a mode of transportation other than their personal automobile. Besides MARTA heavy rail, HJAIA is served by MARTA bus service and Greyhound bus service to Columbus, Auburn, and Montgomery. Additionally, Clayton County operates bus service to Hartsfield, providing Clayton County residents and employees with bus access to the airport.

Hartsfield Area Transportation Management Association (HATMA): The Department of Aviation is a charter member of HATMA. The mission of HATMA includes increasing accessibility and mobility; reducing congestion and improving air quality; and promoting economic development in the HJAIA area. A number of Fulton County-based business are HATMA members.

Compressed Natural Gas (CNG) Fueling Station: The DOA commissioned a CNG fueling station on the airfield's south side in 2001.

Four-Gate Expansion of Concourse E – In 2001, four additional gates were added to Concourse E to accommodate the growth in international travel. Without these gates, aircraft would have been required to park remotely, away from a gate and from preconditioned air and 400 hertz power. When an aircraft is parked remotely, it must run its auxiliary power units continuously, creating emissions. Additionally, passengers have to be transported to and from the Concourse via Planemates – the airport's diesel-fueled passenger transport vehicles.

Expediting of Critical Airfield Construction: HJAIA cannot tolerate the loss of a runway or taxiway without resulting in the delay of aircraft. Aircraft delayed on the ground produce excessive emissions. With that in mind, HJAIA has successfully expedited critical airfield construction and maintenance in about 60 days or less compared to 6 months using conventional construction methods.

Delta Air Lines Use of Electric Baggage Tugs: Delta Air Lines has been proactively upgrading select ground service equipment, replacing their traditional diesel engine driven equipment with electric equipment. This equipment is currently charged at a charging station located below Concourse E.

Delta Air Lines Use of Super Tugs: Delta's hub operation requires the towing of aircraft around the airfield. Aircraft are typically towed to either reposition an aircraft from one gate to another or to taken an aircraft to the Technical Operations Center for maintenance. Previously, a mechanic certified to taxi the aircraft was used to move the aircraft, requiring that aircraft engines be started to move the airplane. With the use of a Super Tug, a driver attaches the tug to the nose gear and tows the airplane. While the

Super Tugs produce emissions, their emissions production is much less than that of an aircraft taxiing under its own power.

Reduce Effects of the Airport as a Heat Island: Research conducted during the 1990s demonstrated that downtown Atlanta and the HJAIA area were the two largest heat island sources in the Atlanta metropolitan area. Dark colored surfaces create surface heat retention that leads to the likelihood of ozone formation. DOA has implemented a policy that all future construction must use light colors on surfaces exposed to the sun to reflect sunlight and reduce surface temperature.

Taxiway N5, M14, and Intersection Upgrades: This project, completed in December 2002, is designed to enhance runway crossing capability and aircraft mobility in critical areas of the airfield. Allowing aircraft to move more easily results in less delay and emissions.

No Open Burning of Vegetative Material: The Georgia EPD has mandated that no open burning shall occur during ozone season (May 1-September 30). The Department of Aviation has chosen to take this further and not permit any open burning of vegetative material. Instead, vegetation that is cleared is mulched and used to help control erosion and sedimentation.

Use of Clean Construction Equipment: DOA incorporates language in construction bid documents that encourages contractors to use “clean” construction equipment (Tier 1 or better). Recent contracts show that the contractors have been complying with this request, as equipment used on two active projects consists of 83 and 94 percent meeting Tier 1 requirements. 100 percent of the fifth runway prime contractor’s construction equipment met either Tier 1 or, at the time, the more stringent Tier 2 requirements. The DOA continues to incorporate this language, reviewed periodically for stringency, in construction contracts.

Fueling Carts: Aircraft refueling requires that prior to fuel entering the aircraft, it must be filtered and the quantity put on the aircraft measured for billing purposes. Previously, a specially equipped pick-up truck was used for this function, requiring the truck to be driven around the ramp to gates. Now, the vast majority of HJAIA gates are equipped with fueling carts that perform the same filtering and measuring tasks, but without the emissions associated with the operation of the pick-up truck.

The following projects are either under construction or are anticipated to be under construction in the near future.

Maynard H. Jackson International Terminal (MHJIT): This project will add ten gates to Concourse E and add an east terminal for local international travelers. Without the gates, aircraft would be required to park remotely from gates, resulting in a reduced passenger level of service and requiring aircraft to run their auxiliary power units when on the ground. Additionally, passengers would have to be transported to/from the Concourse via Planemates. Terminal opening is expected in 2010.

Consolidated Rental Car Facility (CONRAC): The CONRAC will be located west of Interstate-85. The facility will use an automated people mover to shuttle passengers between the facility and existing terminal. Passengers using the APM will no longer be required to ride diesel-powered rental car agency shuttle buses, reducing traffic volumes on the terminal roads and enhancing air quality. Completion is scheduled for early 2009.

Extension of Taxiway “L”: This taxiway extension will provide air traffic controllers more flexibility to sequence aircraft departing from Runway 27R. Providing this flexibility will result in reduced delay and emissions when enroute conditions dictate that certain aircraft are not allowed to depart Atlanta. The embarkment for the extension is in place. The taxiway is expected to be operational by 2010.

Runway 8R Endaround Taxiway: This taxiway will allow Runway 26R arrivals to taxi around Runway 26L instead of crossing the runway and delaying Runway 26L departures. The reduced delay experienced by Runway 26L departures will result in fewer emissions produced. The taxiway, formally, designated as Taxiway “V”, will be operational in spring of 2007.

Continued Use of Conveyor to Supply Airfield Embankment: The DOA received an environmental award from the Airports Council International-North America for its use of an overland conveyor to supply fill material for the airport’s fifth runway. The use of the conveyor negated the need to have dump trucks transport 17.6 million cubic yards of fill material from quarries to the construction site. The DOA is continuing to use the conveyor to provide fill material to raise the area between Runway 9R-27L and Runway 10-28 for future airfield development.

Recycling of Pavement: Because fill material is quite expensive, demolished pavement from the reconstruction of two runways, four taxiway segments, and two partial ramps have been recycled or set aside for recycling. As of spring 2007, approximately 675,000 tons of portland cement concrete has been or will be recycled by being incorporated into embankment.

Use of Two Departure Headings: In the summer of 2006, a second jet departure heading was added to Runway 26L. By using two headings, controllers are able to increase departure throughput from Runway 26L, thereby reducing queuing time of aircraft and emissions.

Parking Pay-on-Foot: As part of the parking revenue control system project, customers will be given the option to pay on foot at a pay station located inside the terminal. By paying at one of these stations, they can then avoid queuing at a parking exit toll plaza and thereby avoid generating emissions associated with queuing at the plaza. This feature became operational in the fall of 2006 and is continuing implementation through 2007.

Airlines Optimizing Fleet Mixes: Due to the high price of jet fuel, airlines are continuing to fine tune schedules and the aircraft types to fly these schedules. With some carriers shifting their fleets to regional aircraft, aircraft of very specific sizes can be accurately matched to a given destination by time of day and anticipated passenger load. Aircraft that fly with higher load factors result in fewer emissions per passenger.

Delta Air Lines Electric Ground Service Equipment Charging Stations: Delta is expanding its charging capability by constructing additional charging stations on ramp level at Concourse E. These stations will be completed in the spring of 2007.

Single Engine Taxi: While single engine taxi has always been recognized as a means to conserve fuel, the practice has become increasingly important due to the high cost of jet fuel. It is at the pilot's discretion to determine when an aircraft taxis with only one engine operating.

Automatic Vehicle Identification (AVI) in Ground Transportation Center: The Ground Transportation Center is served by shuttle buses from many hotels and other facilities. These vehicles will dwell for excessive periods of time with their engines running. With the implementation of the AVI project in the Center, vehicles will be equipped with transponders and bus operators will be billed based on the number of times they access the Center and the amount of time they spend in the Center. Because they will be billed for their use of the Center and the amount of time spent within the Center, there will be a disincentive to dwell excessively, thereby reducing emissions.