

NEW YORK AIRPORT PRICING: FREQUENTLY ASKED QUESTIONS

BY ROBERT W. POOLE, JR. AND BEN DACHIS

What is congestion pricing?

The basic idea is to charge a higher price for using a congested transportation facility (a highway, airport, seaport, etc.) at times of day when demand is greater than capacity, and lower prices at other times. Congestion pricing has been used successfully for over a decade on U.S. high occupancy toll (HOT) lanes, at the Ports of Los Angeles and Long Beach, and on the roadways of London, Stockholm, and Singapore.

Why use congestion pricing for the New York airports?

Today at Kennedy, LaGuardia, and Newark, airlines schedule far more flights during their peak periods than can safely be accommodated on the runways. The result is long delays, especially for take-offs (e.g., the hour-long taxi-out times in the evening at JFK). It's a "tragedy of the commons" situation, since if any one airline cuts back its schedule, another airline will fill that spot. In the past, the federal government imposed strict hourly limits on the numbers of flights airlines could schedule at Kennedy and LaGuardia—and is threatening to do so again. Congestion pricing offers an alternative way to reduce delays. Significantly increasing

the charge to take off during peak periods would give airlines real incentives to shift some flights out of peak periods and to provide some service with a smaller number of larger planes.

What kind of pricing are you proposing? And where?

We recommend that the Port Authority (which operates Kennedy, LaGuardia, and Newark) replace its current weight-based landing fees with market-based departure fees, at all three airports. The fees would vary by time of day, based on the length of predicted departure queues. This would provide strong incentives for airlines to shift some flights out of the busiest hours, and to shift some flights to somewhat larger planes.

Why do this at all three airports? Why not try it out at one of them?

Newark, LaGuardia, and Kennedy were the 2nd, 3rd, and 5th-most congested airports in the country in 2006, and are likely to rank even higher for 2007. If you priced just one, some traffic would be diverted to the other two, making their congestion even worse.

How much congestion relief do you expect this pricing would accomplish?

The “war game” simulation of pricing for LaGuardia, done under FAA contract, showed a 10% reduction in flights with no reduction in the number of annual passengers. That’s because airline schedulers taking part in the simulation substituted larger planes for some flights now using smaller planes, in response to the higher runway charges at peak hours. (This is called “up-gauging.”) The modeling for JFK showed similar up-gauging, and reductions in departure queues at peak periods from about 45 aircraft to about 30—a one-third reduction. That’s not eliminating congestion, but it’s a significant reduction. And again, this can be achieved without reducing passenger volumes, since airlines will up-gauge some flights in response to the pricing.

Won’t ticket prices go much higher if airlines have to pay a lot more to use the runways?

Not by much! The best news from this study is how little impact there would be on most passengers (except for less delay). The highest runway charges would be during the evening peak hours at JFK and the morning peak hours at Newark. In both cases, the peak runway charge would be about \$2,000 per take-off. At JFK, a 747 pays over \$3,400 right now, so if this pricing system replaced current landing fees, the 747 flight would save money. A 767 now pays about \$1,600 at JFK, so it would see a \$400 increase during the evening peak. But if it’s carrying 250 passengers, that’s a less than \$2 per passenger increase. But look at the impact on a 35-seat regional jet. Its current weight-based fee is only \$181, so the increase to \$2,000 works out to \$52 per passenger more, if the airline continues to schedule it during the evening peak. That’s why airlines will move that kind of flight out of peak periods, when fees would run between \$200 and \$1,000 per plane, we estimate.

But aren’t all hours at LaGuardia and Kennedy overloaded? There aren’t any “off-peak” times to move flights to.

That’s dead wrong. Our report shows proposed prices varying throughout the day, mirroring dramatic differences in the length of departure queues. All three airports have distinct peaks and valleys, especially Kennedy and Newark. But even LaGuardia has much shorter queues in the morning and evening than in the afternoon.



You place great stock in “up-gauging.” What makes you so sure it will happen?

We have two kinds of evidence. Most of it comes from increasingly sophisticated economic modeling, incorporating airline network modeling software. But it’s confirmed by recent “war-game” exercises in which real airline schedulers played the role of airlines responding to various demand-management alternatives at LaGuardia. They did not “up-gauge” when faced with mandated cuts in the number of flights. But when faced with congestion pricing, they did up-gauge (in addition to moving some flights out of peak periods), just as the modeling predicted. These exercises were funded by the FAA, and included participation by FAA and Port Authority people. The results significantly increase our confidence in what sophisticated pricing models predict.

Won’t small cities lose vital service to and from New York?

At LaGuardia, 92% of passengers either start or end their trips in New York (as opposed to using the airport to transfer from one flight to another). Thus, if any city were to lose all flights to/from LaGuardia, those flights may shift to one of the metro area’s five other airports with airline service. In the “war game” exercise, most of the flights eliminated from the schedule at LaGuardia were not on the smallest (under 30 seats) planes that typically serve small, rural locations. Rather, they were 50-seat regional jets providing frequent service to big cities like Boston and Chicago. Those are the kinds of flights most likely to be up-gauged, as we observed. The results were similar for Kennedy and Newark.

Won't pricing make it unaffordable for private planes in New York?

In the New York metro area, there are 15 airports with control towers and over 30 airports altogether. Hardly any private planes use the three major airports, and nearly all of those are business jets—an average of 18 per day at JFK, 21 per day at Newark, and 30 per day at LaGuardia. Since these jets cost between \$2,200 per hour (Citation II) and \$7,900 per hour (Gulfstream V) to own and operate, a significant increase in runway charges at these airports might shift some away from peak periods and shift many more to reliever airports like Teterboro, Morristown, Westchester, and Republic (where most business jets operate from anyway). But those really needing to operate into LaGuardia may be willing to pay the price.

How did New York's airports get so congested in recent years?

These three airports have been congested for decades, but it's gotten much worse in the last five years. Why? Airlines have engaged in large-scale “down-gauging.” At LaGuardia, the number of scheduled flights in planes of under 100 seats has grown by 35% from 2002 to 2007—while all flights using planes larger than 200 seats have been eliminated. At Newark, under-100-seat flights are up by 34%, while those with 100–200 seats have grown just 2%. And at JFK, where the biggest increase in delays has occurred, the number of under-100-seat flights has more than doubled, from 75 to 171, while flights of planes over 200 seats have declined by 12%—yes, at JFK, the nation's most important hub for large-plane trans-Atlantic service! This is clearly a poor use of premium airport capacity.

Airlines say JFK is a special case and that pricing would play havoc with trans-Atlantic service. What about that?

Airlines raise two concerns. First, there is a limited early-evening time window for trans-Atlantic departures. Second, they depend on connecting flights from numerous cities to “feed” long-haul flights, including those to Europe. Our modeling showed there is plenty of capacity in the evening window, once small regional jet flights shift out of that peak (as they would, in response to \$2,000 runway charges then). And there is a much less congested noon to afternoon period when feeder flights can arrive, especially if some of those passengers are consolidated into a smaller number of larger planes from key “feed” cities such as Boston, Pittsburgh, or Columbus. Congestion pricing frees up the capac-

ity needed for the crucial trans-Atlantic service, without interfering with the needed feed from other cities; at worst, some of those connecting passengers might have to arrive at JFK somewhat earlier. But their trans-Atlantic flight would then spend less time waiting in a long queue to depart.

Airlines say foreign competitors would be exempted from congestion charges; that would give them an unfair advantage.

In the past, when the feds have imposed mandatory schedule cutbacks at airports such as JFK or Chicago O'Hare, they have exempted foreign carriers. That's because under U.S. bilateral treaties with other countries, their airlines have the right to serve airports like JFK. (And some might have only one flight a day.) But charges to use an airport's runway are an airport's prerogative, anywhere in the world. Both bilateral treaties and international civil aviation law recognize this, and require only that such charges not discriminate between domestic and foreign airlines. So there is no case for foreign airlines to be exempted from paying market-based runway charges.

The real solution to congestion is to expand airport capacity. Won't pricing just enrich the Port Authority?

There are many ways in which the capacity of these airports can be increased—better air traffic control (ATC) procedures, new ATC technologies, and in some cases runway and taxiway improvements. If the FAA and the Port Authority agree that pricing and capacity expansion must go hand in hand, we can have the best of both: pricing will both reduce delays and generate revenue to help pay for expanded capacity. The airlines point out that the Port Authority has an exemption from normal federal rules that require all airport revenue to be spent for airport purposes. That means special provisions need to be put in place, to legally ensure that any and all net new revenues from congestion pricing be dedicated to airport capacity expansion.

Isn't congested airspace a big part of the problem of airline delays in New York?

Yes it is. Airspace congestion has grown significantly in the area of the New York terminal radar approach control (TRACON) center. During just the last four years, as total congestion in this region has tripled, airspace delays grew from just 4% to a whopping 37% of the total. For that reason, we recommend that the FAA institute a charge for all

instrument flight rule (IFR) turbine flights in this airspace, in addition to the airport runway charges we recommend that the Port Authority implement.

Why does Transportation Secretary Mary Peters support airport congestion pricing?

Secretary Peters is continuing the department-wide Congestion Initiative launched by her predecessor, former Secretary Norm Mineta. That effort is encouraging the use of congestion pricing in all modes of transportation, based on its demonstrated success in the highway field. Earlier this year, New York was selected for one of five Urban Partnership Agreements, to implement a form of congestion pricing in Manhattan. Mayor Bloomberg and City Comptroller William Thompson also support congestion pricing for the New York airports.

Why do airlines oppose congestion pricing?

Airlines have expressed concerns over whether pricing will work effectively. They also worry that a focus on reducing demand at peak periods may divert attention from vitally important efforts to expand the capacity of the New York airports. And some airlines with large investments at the New York airports hope that if mandatory schedule cutbacks are imposed instead of congestion pricing, they will be given entitlements to the large majority of all operations, making it difficult for new entrants (offering different combinations of prices and service) to serve New York.

Why isn't cutting back and capping the number of scheduled flights a good idea?

Both the “war game” exercises and the economic modeling show that if airlines are required to cut scheduled flights, they will most likely do so in a way that reduced the number of passengers. That would hurt the New York metro area’s economy. By contrast, a congestion pricing system provides strong incentives for airlines to up-gauge, meaning the New York area can serve the same number of passengers as now—with substantially less delay. That will give the region breathing room to begin the hard work of expanding airport capacity.

Why is congestion pricing better than auctioning off the allowed number of landings and take-offs?

Economists agree that in the long run, the impact of auctions would be virtually the same as that of congestion

pricing; both would push airlines into making schedule decisions that maximize the economic value of limited runway capacity. However, an auction system would take a lot longer to set up, and most plans call for it to be phased in over anywhere from five to 20 years. Hence, it would be a long time before an auction system produced meaningful reductions in delays and congestion.

On a national scale, how big a problem is New York airport delays?

According to an analysis of FAA data by MITRE Corporation, delays generated at just these three airports (Kennedy, LaGuardia, and Newark) account for 37% of total delays nationwide. Back in 2002, before airlines started significantly down-gauging flights at these three airports, the comparable figure was only 12% of nationwide delays. At an airport with plenty of capacity, down-gauging enables an airline to serve, say, 300 passengers on a route with 10 daily flights in 35-seat regional jets (average load 30 passengers), offering numerous choices of departure time. But at highly congested airports, it would be far more sensible to provide that same capacity using five 70-seat regional jets, instead. That would cut the number of landings and take-offs in half, while still serving the same number of passengers on that route. That is the kind of up-gauging that congestion pricing would stimulate. ■



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