

**BEFORE THE  
FEDERAL AVIATION ADMINISTRATION  
DEPARTMENT OF TRANSPORTATION**

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**NOTICE OF ALTERNATIVE POLICY  
OPTIONS FOR MANAGING CAPACITY  
AT LAGUARDIA AIRPORT AND  
PROPOSED EXTENSION OF LOTTERY  
ALLOCATION**

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**Docket No. FAA-2001-9854**

**COMMENTS OF THE UNITED STATES  
DEPARTMENT OF JUSTICE**

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**I. Summary**

The Federal Aviation Administration (FAA) has requested comments on policy options for allocating capacity at LaGuardia Airport (LGA).<sup>1</sup> The Department of Justice (DOJ) supports the goal of finding an effective and comprehensive solution that both addresses the problem of congestion efficiently and encourages competition at LGA. To this end, DOJ urges the FAA to rely to the maximum extent possible on market-based solutions and supports the adoption of an auction mechanism for allocating capacity at LGA.

As recent experience has shown, congestion problems at LGA can have a significant effect not only on service to LGA, but on the nation's entire air transportation system. To avoid excessive congestion, some form of rationing arrivals and departures will continue to be necessary at LGA. The basic policy choice is whether to adopt market based rules or to continue

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<sup>1</sup> Notice of Alternative Policy Options for Managing Capacity at LaGuardia Airport and Proposed Extension of the Lottery Allocation. 66 Fed. Reg. 31,731-48 (June 12, 2001) (hereinafter "Notice").

with an administrative system similar to the one being used today.

Market-based rules are the most efficient means for allocating scarce capacity. With more efficient slot allocation rules, competition among airlines both on individual routes and among alternative airline networks would increase. Market-based mechanisms (like creating a recurring auction market for slots) may increase the ability of new entrants to gain access to LGA. An administrative system, on the other hand, would not assure that the slots -- a scarce resource -- are put to their highest valued use. It would also be less effective at permitting greater competition at LGA. Therefore, the FAA should give serious consideration to market-based proposals for access to the limited resources at LGA.

## **II. Background**

### **A. A Brief History of Slot Regulation at LaGuardia**

Demand for access to LaGuardia exceeded its capacity even before the airline industry was deregulated. The first set of slot rules was promulgated by the FAA in 1969. The rule, known as the High Density Rule (HDR) limited the number of landing and take-off slots available at LGA and other congested airports.<sup>2</sup> Under HDR, carriers then serving LGA were granted slots entitling them to operate at LGA. Subject to the FAA's "use or lose" regulations and other conditions, the slots thus granted became as a practical matter the property of the grantee airline in perpetuity -- assets that could be bought, sold or pledged as collateral. The HDR rules divided slots into two categories: air carrier slots useable by any type of aircraft, and "commuter slots" that were restricted to smaller aircraft. In April 2000, Congress enacted a major reform of the slot rules when it passed the Aviation Investment and Reform Act of the 21<sup>st</sup>

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<sup>2</sup> See 14 CFR, Part 93, Subpart K.

Century (AIR-21). AIR-21 exempts flights by new entrant carriers or flights to small airports with aircraft under 71 seats from the slot rules. AIR-21 also provided a sunset provision that would end the HDR entirely in 2007.

AIR-21 opened the floodgates for new service at LGA, and exemption requests for over 600 flights were filed with DOT. By October 2000, the total number of monthly operations at LGA had risen to over 37,000, compared to approximately 31,000 operations in April of 2000, an increase of 200 operations per day. The air traffic system at LGA was unable to handle the sudden increase in scheduled flights, and delays at LGA soared. In October 2000, 27% of all operations at LGA were delayed, compared to just 10% of operations previously.<sup>3</sup> Concerned by the level of delays and congestion, the FAA imposed a temporary cap that restricted AIR-21 operations to 159 per day, and allocated them by lottery to air carriers. After the attacks of September 11, the FAA observed that the use of slots and slot exemptions at LGA declined by 14% below the previous year's levels, but airline schedule filings suggest that flights will return to their pre-September 11 levels by the end of summer 2002.<sup>4</sup>

#### B. Congestion Externalities

While AIR-21 was intended to resolve a number of perceived problems with the current slot system as it had evolved under HDR, simply removing the access restrictions without dealing with the underlying capacity problem created problems of its own. Allowing unfettered access to a valuable public resource like landing and take-off slots at LGA created delays

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<sup>3</sup> Notice at 31,733.

<sup>4</sup> FAA press release, "FAA sets New Date for Comments on LaGuardia Demand Management Options," March 22, 2002.

because each user of slots ignored the effect that congestion had on other users of the common airspace. Although each airline realized that its decision to add a flight contributed to the congestion at the airport, the bulk of those congestion costs were borne not by the airline adding the flight, or even its passengers, but by all the airlines (and all of those passengers) that wanted to take off or land at the same time. When AIR-21 slot exemptions became readily available, the predictable result was that individually rational decisions by the airlines about adding flights generated large, negative congestion externalities that affected all passengers. Thus, in September of 2000, even after they had added more than 200 flights to LGA and as delays at LaGuardia were mounting, the airlines were still planning to increase flights dramatically. When the FAA stepped in to cap the total number of slots per hour at 81 (compared to 104 slots per hour being used in October 2000), delays dropped substantially from 27% to just 8% of all operations.<sup>5</sup>

As this experience shows, the question is not whether scarce slot resources will be rationed, but how. Without some mechanism designed to allocate scarce airport capacity, congestion and delay inevitably result. When air traffic control is forced to delay flights, it adversely affects all passengers on flights into or out of LGA. Moreover, given the hub and spoke systems of many carriers, delays at one airport quickly spread to the rest of the nation's air traffic system when connecting flights do not arrive on schedule. On the whole, a system that invites congestion and delay imposes large costs in the form of wasted time and general frustration on the traveling public.

C. Competitive Effects of the Existing System

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<sup>5</sup> Notice at 31,733.

The high demand for LGA slots indicates that many airlines consider service to this airport to be a valuable part of the service they offer to travelers.<sup>6</sup> To encourage efficient slot usage, the FAA has permitted secondary trading in slots to provide a market mechanism for the exchange of these rights. Despite the existence of this secondary market for slots, however, there have been persistent complaints that entrant carriers are unable to obtain slots from incumbents. Such claims reflect either (a) the unwillingness of entrants to pay competitive prices for slots, or (b) anticompetitive actions that have prevented entrants from obtaining slots at competitive prices.

Although a large number of slots have changed hands since the institution of the buy/sell rule (in part due to the demise of incumbents like Eastern and TWA), the sale of large groups of slots appears to be infrequent. Due to the sporadic availability of slots, entrants (or incumbents seeking to expand service) often find it difficult to acquire sufficient slots to establish a viable service pattern in a city pair. A viable service pattern often requires multiple flights during the day to offer convenient alternatives to passengers, particularly if the entrant must compete with an incumbent offering multiple flights. In addition, flights need to be timed to hit peak demand periods and to connect to other flights at the carrier's hub.<sup>7</sup>

The primary difficulty facing entrants is that incumbents with market power in city pairs

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<sup>6</sup> For many passengers traveling in New York markets other airports in the metropolitan area (Newark, JFK) are a substitute for LGA. It appears, however, that some passengers, including many high yield business passengers, have a strong preference for LGA and the airlines therefore place a high value on the ability to serve LGA.

<sup>7</sup> Leasing slots is an alternative to outright purchase, but such leases often contain provisions that allow the incumbent to cancel the lease on relatively short notice.

the new carrier might like to enter will always have an incentive to outbid an equally efficient entrant for any slots offered.<sup>8</sup> Indeed, an incumbent with market power may well be able to outbid a more efficient entrant, simply because maintaining market power is more profitable than entering a competitive market. Moreover, given the entrant's need to establish a regular pattern of service, an incumbent pursuing this strategy need not prevent all sales, but only enough to prevent the entrant from reaching a viable scale. And, once a potential buyer's identity is known to the seller, the seller has every incentive to seek out an incumbent airline that would be willing to offer more money to maintain its market power than the entrant would be willing to pay to erode it.

Not surprisingly, most entrants have been unsuccessful in purchasing slots to begin service at LGA. Instead, many of the entrants at LGA obtained their slots through special exemptions granted by the FAA rather than through the existing secondary market for slots.

### **III. General Principles**

The physical constraints at LGA dictate that only a limited number of flights per hour are possible. Given this need to ration capacity in order to ensure safety and avoid significant delays, alternative allocation proposals should be evaluated using two basic principles. First, the mechanism chosen should ensure efficient allocation of scarce capacity at LGA, with slots going to their most productive use. Second, the mechanism chosen should permit competition to

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<sup>8</sup> Entrants have made allegations of such preemptive purchases. See Joseph Leonard, "The State of Airline Competition The Lack of Access to High Density Airports Restricts the Growth and Benefits of Low Fare Competition," Hearings before the Subcommittee on Aviation of the Committee on Transportation and Infrastructure House of Representatives, One Hundred Sixth Congress, October 20, 21, 1999 (U.S. Government Printing Office, Washington: 1999) p. 54.

flourish. A solution that creates an ongoing and anonymous primary market to allocate available slots is the best way to achieve both of these goals.

The most efficient method of allocating any scarce resource is through the market price mechanism. Efficient allocation of slots will occur if carriers are required to compete and pay for slots in the marketplace. If carriers pay for slots, then, in the absence of market power, the slots will go to those carriers that can most productively use them -- i.e., those carriers that have the greatest passenger demand or the lowest operating costs -- because they will be willing to pay the most for the slots. The incumbents and new carriers that can most productively utilize scarce slots will increase their operations. Other carriers will shift operations to less restricted hours (when slot prices will be lower) or shift operations to airports that are not slot constrained.

A market-based approach can also enhance opportunities for competitive entry and expansion if a significant number of slots come up for sale on a regular basis. Allowing entrants to compete in a competitive primary market for the purchase of slots will increase the chances that more efficient entrants are able to acquire the slots they need. In addition, a competitive market for slots will make it easier for more efficient incumbent carriers to obtain slots to expand service at LGA.

#### **IV. Comments Regarding the Specific Proposals in the Notice**

The Notice seeks comments on five different proposals for allocating slots at LGA. Two (an auction system and congestion pricing) are market-based mechanisms that have been proposed by the Port Authority of New York and New Jersey. The other three proposals involve



modifications to the administrative system currently used to allocate slots.<sup>9</sup>

A. Slot Auctions

An auction system to allocate a fixed number of slots is superior to the alternative proposals. Use of the market rather than an arbitrary allocation (e.g., a lottery or an historically based system with grandfathered rights) is more likely to result in slots being allocated to the user that values them most highly. In addition, giving each airline an equal opportunity to obtain slots in a primary market, rather than relying on a secondary market, may allow airlines to overcome some of the difficulties they experience seeking slots under the current system. In designing a primary auction system, the factors discussed below should be considered.

To be effective in promoting competition, an auction should have a large number of slots available for bidding at regular intervals, and bidders should be anonymous.<sup>10</sup> An ongoing, primary market for slots can be created by limiting the duration of the right granted by a slot. When slots expire, they would be re-auctioned. In essence the current system of slot “ownership” by incumbents would become a rental market with carriers bidding to lease slots from the slot authority for a specified period. One proposal in the Notice suggests auctioning 25% of the available slot pool every four years. Once auctioned, a slot would have a four year life span, after which it would be re-auctioned by the slot authority. Such a plan allows a clear

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<sup>9</sup> As suggested in the Notice, these comments do not address any statutory changes necessary to implement the proposals.

<sup>10</sup> Some of the proposals suggest setting aside a small number of slots for service to smaller communities. To the extent that the FAA thinks that such set asides are valuable, DOJ encourages the FAA to use market-based allocation mechanisms for any such restricted slots as well. A second auction for any restricted slots will ensure that carriers that can most efficiently provide service to small markets will obtain these slots.

planning horizon for use of slots, and still makes enough slots available on the market on a regular basis to facilitate efficient entry and expansion. A finite lease period could also reduce the need for “use or lose” regulations, which create their own set of skewed incentives.

It will be important before adopting an auction plan to give careful economic analysis to the optimal percentage of slots to be auctioned at any given time, as well as the appropriate length of the lease rights to be auctioned. The FAA should seek comment on the adequacy of four years (or some greater or lesser period) as a planning horizon for service at LGA. Of course, the fact that slots are reaucted would not necessarily mean that all slots would change hands at the end of the relevant time period, since in many cases the incumbent owners will place the highest value on the slot.

Other factors also merit consideration in determining the optimal timing and size of a slot auction. For example, although the secondary market for slots has not created sufficient opportunity for new entry and movement of slots to their most highly valued use, the current holders of some slots did obtain them in open-market transactions. This should be considered in determining the order and timing by which slots should be put into an auction. The effect of a slot auction upon providing LaGuardia service to and from various destinations is another relevant consideration.

To allow firms to establish meaningful service patterns, any auction should be a simultaneous one. In a simultaneous auction, bidders can make bids on multiple slots at once, allowing them to assemble the package of slots to support their desired service at one time rather

than through relying on good luck in lotteries over multiple years.<sup>11</sup>

In addition, auctions should be conducted in a way that masks the identity of bidders from each other. Anonymity makes it more difficult and expensive for an incumbent with market power to exclude a rival by outbidding it. A simultaneous auction can show just two pieces of information to each bidder for each slot: what the high bid is, and whether the bidder is highest. With the identities of other bidders masked, a carrier will not include in its slot valuation the potential value of precluding a likely rival from obtaining the slot. Strategic bidding to exclude a particular carrier that is likely to enter a city pair dominated by the bidder will also become far more difficult if enough slots are auctioned to allow for a liquid market that contains many bidders.

Encouraging competition among carriers through an auction mechanism does not imply that overall charges to airlines and passengers need to be raised at LGA. The objective of the auction is to encourage efficient use of capacity by varying the price of capacity in response to demand. Therefore, money raised by auctioning the right to land and take-off can be used to reduce other flat fee charges that the airlines or their customers would otherwise pay. For example, LGA could use the revenue raised by auctioning slots to reduce Passenger Facility Charges (PFCs) that would otherwise be imposed uniformly on every ticket sold.

#### B. Congestion Pricing

Congestion pricing is an alternative market-based mechanism to ration demand. By setting the price higher during peak periods, demand can be reduced until it no longer exceeds

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<sup>11</sup> The FCC has experimented with a variety of simultaneous auction procedures in its wireless auctions, and some of its auctions methods would be well suited to auctioning slot reservations at LGA.

the limited supply available. In principle, setting a congestion fee can exactly mimic any outcome that an auction provides. In practice, however, such a plan may be very hard to implement efficiently due to the difficulty of setting the correct fee.

The shortcoming of the congestion fee approach is that the slot-granting authority will have difficulty obtaining the information necessary to set the fee at exactly the right level. If the fee is too high, traffic will be reduced too much and flights that could be efficiently operated will be eliminated. If the fee is too low, the number of scheduled operations will be too high, resulting in increased congestion and substantial delays. The informational problem is exacerbated by the fact that demand for air travel fluctuates during the day, which means that the fee level must also fluctuate. Getting the fee “wrong” by just a small amount for any time period would seriously impact operations at LGA and in the national air traffic system as a whole. An auction approach will provide the right market signals to decrease congestion without imposing extensive information requirements on the slot-granting authority. With an auction approach, the slot-granting authority need only calculate the maximum capacity of the airport, and then it can allow the market to set the appropriate price.

C. Encouraging the Use of Larger Aircraft

One of the administrative proposals advanced by the FAA would establish a minimum size requirement for aircraft operating at LaGuardia. Currently, a significant fraction of LGA’s total operations are being operated by small aircraft rather than by medium sized jets that would carry more passengers, and that fraction has increased under the current system. Operations by aircraft with fewer than 77 seats increased from 26.5% in April 1996 to 36.7% in April 2001.<sup>12</sup>

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<sup>12</sup> Notice at 31,734.

Rather than using market signals to encourage carriers to use larger aircraft, the proposal would establish a minimum size requirement for aircraft operating at LaGuardia. Existing slots would be withdrawn and reallocated according to proposed schedules submitted by the airlines. Preference in slot assignment would be given to large aircraft (above a minimum size), with any remaining slots allocated to carriers with smaller aircraft. To preserve service to small and non-hub airports, a baseline allocation of 150 slots would be allocated to carriers seeking to serve smaller communities.<sup>13</sup>

This proposal, while laudable in its intent to give more passengers access to LGA, may encourage carriers to “game” the system to acquire valuable LGA slots. In particular, carriers would be encouraged to “up size” their equipment beyond what is economically efficient in order to obtain preference in the slot assignments. The carriers most disadvantaged by this proposal are likely to be new entrants, which tend to operate a smaller size of aircraft uniformly throughout their fleets and have less flexibility than the major airlines to reallocate larger aircraft to LGA service. In addition, this proposal does not address what will happen when (inevitably) multiple carriers submit requests for schedules with equal plane sizes that collectively exceed the available capacity.

A market-based auction system would encourage the efficient use of scarce resources at LGA without these drawbacks. If the best use of a slot is a large jet operation (as will often be the case) a carrier planning such an operation will bid more than a carrier planning a small plane

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<sup>13</sup> Notice at 31,738-39. Although the FAA is considering regulating the size of aircraft used by scheduled carriers, it does not propose to restrict general aviation access to LGA. General aviation is the most inefficient use of scarce airspace imaginable, and the FAA should not seriously consider exempting it from any general regulation of aircraft size at LGA.

operation. On the other hand, if some small market/small aircraft operations are more highly valued than certain large jet operations, in which case the carrier planning such service will win the slot. Rather than attempting to regulate aircraft size, the FAA should adopt a system in which the market is allowed to determine which markets are served by which airlines with which aircraft.

D. Establishing a Pool of Slots for Small Community Service and  
Withdrawing Slots to Reallocate to New Entrants

The second administrative solution proposed by the FAA would essentially preserve the current system and allocation of slots, with some limited rationalization of the current set of rules. The AIR-21 slots would be “codified” and added to the existing HDR slots, while small community service would be provided from a designated pool of 260 slots. To provide access for new carriers, a “limited” withdrawal of 3% or less every year or every two years from the air carrier HDR slot category would provide a pool that could be reallocated to new entrants by lottery. While this rule may ease the regulatory burden imposed by having multiple criteria for slots, it does not resolve the underlying problem of providing adequate access to new entrants and expansion by efficient incumbents.

The proposal allocates less than 3% of the slots every year or two for entrants, which means that *at most* 2 slots (i.e., one landing and one departure) would likely become available in any given hour. Moreover, since a lottery would be used to allocate these slots among all new entrants, individual entrants will be severely limited in the total amount of service they can offer. Entrants will find it difficult to get enough slots to operate a viable schedule to their hub cities as a result of this process. These problems will be exacerbated if the lottery takes place only once every two years. This plan thus largely preserves the status quo and makes it likely that entrants

will continue to find it difficult to obtain access to LaGuardia.<sup>14</sup>

E. Reallocation of Slots Under a Replacement Rule

The final administrative proposal offered by the FAA would consolidate all HDR slots, pre-AIR-21 slot exemptions, and AIR-21 slot exemptions, and then reallocate them to their existing holders every two years.<sup>15</sup> A very small percentage of total slots would be held back to provide three separate lotteries: one for new entrants, one for small community service, and a third that would simply redistribute slots among existing incumbents.

Under this proposal the status quo will be largely preserved, with a disproportionate share of slots allocated to incumbent carriers and almost none to new entrants. Collectively, all three proposed lotteries would make just 35 slots available, and of those, approximately 12 slots will be reassigned to the existing incumbents, and another 12 will be assigned for small community service. Thus, just 11 slots would be available for new entrants, or 5.5 round-trips *per day*. Since these slots will be allocated by a lottery, it is likely that the multiple new entrants competing for these slots will be unable to obtain more than one or two slots for service. Although that service pattern might be adequate for some small communities, it cannot begin to match the type of service routinely offered by incumbents from their hubs.

**V. Conclusion**

LaGuardia is an important airport for many passengers throughout the country. As the

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<sup>14</sup> In addition, while the proposal sets aside slots for service to small communities, the plan includes no primary market mechanism for ensuring that these slots go to the carriers that can most efficiently use them.

<sup>15</sup> Notice at 31,740.

recent experience with relaxing the access rules at LaGuardia shows, some form of rationing will take place when demand for a scarce resource exceeds supply. The alternatives under consideration may alleviate delay, but they would have widely varying impacts on competition. In order to promote a vibrant and competitive airline system, the scarce LGA capacity should be allocated in a way that encourages rather than discourages competition. A periodic anonymous auction provides a market-based solution that would enable all carriers -- both incumbents and entrants -- to compete for access based upon how efficiently they can use this scarce resource. By creating an efficient primary market for landings and departures at LaGuardia, an auction can limit the costs of excessive congestion while still permitting competition in the nation's air transportation system.

Respectfully submitted,

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