

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

In re:

**Notice of Alternative Policy Options
For Managing Capacity at LaGuardia
Airport and Proposed Extension of the
Lottery Allocation**

**Docket No. FAA-2001-9854
(Phase Two)**

COMMENTS OF THE AIR TRANSPORT ASSOCIATION OF AMERICA, INC.

Introductory Comments

The Air Transport Association of America, Inc. ("ATA") submits these comments in response to the Notice of Alternative Policy Options For Managing Capacity at LaGuardia Airport and Proposed Extension of the Lottery Allocation ("RFC") issued by the Department on June 12, 2001.

ATA members¹ account for more than 95% of domestic passenger and cargo traffic, and more than 76% of all U.S. commercial aircraft departures annually. ATA member airlines have a significant interest in operations at LaGuardia Airport ("LGA")

¹ Members are: Airborne Express, Alaska Airlines, Aloha Airlines, America West Airlines, American Airlines, American Trans Air, Atlas Air, Continental Airlines, Delta Air Lines, DHL Airways, Emery Worldwide, Evergreen International, Federal Express, Hawaiian Airlines, JetBlue Airways, Midwest Express Airlines, Northwest Airlines, Polar Air Cargo, Southwest Airlines, United Airlines, United Parcel Service, and US Airways. Associate members, *not participating in this filing*, are Aerovias de Mexico, Air Canada, Canadian Airlines International, KLM-Royal Dutch Airlines, and Mexicana de Aviacion.

and the policy options listed in the RFC. Those options would have direct and immediate impacts on ATA member airlines, in terms of competitive services, flight operations, and economic impact. Quite simply, the options under consideration -- which would involve radical and untested changes from longstanding policies and practices -- would dramatically impact the very essence of the ATA members' operations and the services they offer to the flying public.

FAA has asked for comment on so-called "market-based" options to reduce delays associated with operations at LGA. FAA suggests that the level of delays at LGA in 2000 and early 2001 required a response specific to LGA, separate from any study of delay reduction on a nationwide basis.² But by July 2001, the date of the RFC, delays had subsided significantly due to steps taken by the FAA and by airlines.

Of course, the context in which our nation's air transportation system operates changed dramatically on September 11, 2001. The issue of congestion-related delays does not have the significance it might have had prior to that date, nor can pre-September 11 patterns and statistics be viewed as predictive of future events. It simply would not be prudent to promulgate new regulations or enact new laws based on pre-September 11 assumptions. For that reason alone, no new policies for LGA should be considered until sufficient time passes to enable the FAA, the air transportation industry, Congress, and other interested parties to evaluate current conditions.

² A subsequent notice and request for comment, issued by DOT on August 15, 2001, asks for comments on market-based options to reduce congestion and delays nationwide. ATA will provide a separate response to the DOT request for comments.

With that in mind, and recognizing that the long-term effects of the events of September 11 will not be known for some time, ATA submits these comments, which are based primarily on the conditions that existed just prior to September 11, 2001. In these comments, ATA will (1) describe the demand management proposals put forth by the proprietor of LGA, the Port Authority of New York and New Jersey ("PANYNJ"); (2) show that these proposals are not necessary; and (3) demonstrate that these proposals are also unwise, unworkable, and not supported by law.

FAA Administrator Jane F. Garvey has stated:

We will continue to work with all interested participants to shape a proposal that recognizes the interests of airline operators at LaGuardia and new entrants, the need for service to small communities, and, of course, the interests of consumers.³

The proposed demand management options would not serve the interests of consumers, airline operators, new entrants, or small communities. To the contrary, these proposals, especially if they have their intended effect, would severely damage the interests of all concerned, except for PANYNJ.

For all the reasons stated below, the demand management proposals are flawed. Local limits on air carriers' ability to schedule air transportation services are not the answer. Increasing capacity in the long run, and using existing technology to make more efficient use of existing capacity in the short run, is the only appropriate response to the

³ Testimony before the House Committee on Transportation and Infrastructure, Subcommittee on Aviation, hearing on Air Traffic Congestion in the New York City Area, July 16, 2001.

public's needs – and the only response that the public will accept. Moreover, the more that efforts are directed at demand management, the more likely it is that airports and the FAA will lose focus on the real problems and fail to provide what the American people want – a system of airports and airways that fosters safe, fast, frequent, efficient air transportation at fair prices.

Equally flawed is the notion of local economic regulation of airline operations. Such regulation has been expressly forbidden by Congress and the courts for many years, with good reason. The national air transportation system cannot be burdened with a patchwork of local regulations which are designed to affect and control airline operations and services. Yet that is precisely the type of regulation proposed by PANYNJ. This issue is discussed more fully below.

The Proposed Demand Management Options at LGA

PANYNJ has proposed two different types of economic demand management options. The first set of options uses congestion pricing as a means of controlling demand at LGA. The second uses an auction process. As we will show below, both have serious flaws.

The congestion pricing options go well beyond any “peak hour” landing fee ever proposed at any airport. Peak hour pricing is generally used to shift demand from a time period of heavy use to one of lesser demand. The congestion pricing proposals for LGA

are not designed to shift flights to different times, but rather to decrease the total number of operations.⁴

Under the PANYNJ proposal, the additional landing fee would be in effect at virtually all hours -- from 06:00 to 22:00 on weekdays, from 06:00 to 14:00 on Saturdays, and from 09:00 to 22:00 on Sunday. Further, as PANYNJ states, the amount of the fee “would not be dependent on the historical costs of the airfield at LGA or otherwise dependent on accounting costs incurred by the PANYNJ.” (Demand Management Alternatives For LaGuardia Airport, June 6, 2001, §2.2.1.) The stated purpose of the congestion fee would be to “align the level of demand with the limited capacity of the airfield at LGA.” *Id.* There would be exemptions from the congestion fee for AIR-21 small hub and non-hub operations. *Id.* at §2.5.

Depending on the particular congestion fee option chosen, and the route flown, PANYNJ estimates that the fee (which would be paid in addition to the normal landing fee) would range from \$350 to \$2000 per operation (takeoff or landing). *Id.* at §2.6. Total cost to the airlines of this fee is estimated to range from \$130 million to \$550 million annually.

The auction alternatives proposed by PANYNJ would replace the HDR slots and the AIR-21 slot exemptions. The airport would establish a system of “reservations.” An airline would be required to have a reservation in order to conduct an operation at LGA. *Id.* at §3. The number of available reservations would be limited. Other provisions

⁴ PANYNJ does suggest that in the future it might vary the level of the congestion fees to

would ensure service to small hub and non-hub airports, and availability of slots for new entrants. *Id.* PANYNJ estimates that auction prices would range from \$20,000 to \$30,000 per reservation per month, with total costs to the airlines in the range of \$60 million to \$90 million annually. *Id.* at §3.3.4.2.

The Proposals are Unnecessary

Even before September 11, there was serious doubt that further demand management actions were needed at LGA to deal with delays. The significant delays which had occurred at LGA in the latter half of 2000 and the first half of 2001 had already decreased as a result of actions taken by the FAA and the airlines.

Delays at LGA had increased significantly in 2000 due to the increased number of operations authorized under the “Wendell H. Ford Aviation Investment and Reform Act for the 21st Century” (AIR-21”). As a result of AIR-21, air carriers meeting specified criteria could obtain slot exemptions at LGA for new entrant service or service to small communities.

FAA air traffic operations data reported by OPSNET for September 2000 indicated that, as a result of new services instituted under the provisions of Air 21, there were 1,163 average daily operations at LaGuardia, an increase of approximately 18 percent over the September 1999 level of 982 average daily operations. OPSNET also reported that air traffic control delays of 15 minutes or more at LaGuardia increased to 10,515 in September 2000 from 3,108 in September 1999.

manage hour-by-hour demand. RFC at 31744.

The increased volume of operations, and the adverse impact of this volume increase on operations at LGA and across the air traffic system in whole, led the FAA to limit the number of AIR-21 slot exemptions at LGA and to allocate the slot exemptions by a lottery on December 4, 2000. Through this lottery, the FAA allocated 159 slot exemptions. The so-called "slottery" was originally to remain in effect until September 15, 2001, but has been extended until October 26, 2002 (66 FR 41294; August 7, 2001).

The FAA's action had a dramatic effect on the level of delays at LGA. As the FAA itself described operations at LGA in July and August, 2001,

"[C]arriers are experiencing a significantly different operating environment at LaGuardia. The FAA has established a limit of 75 scheduled operations per hour, which reflects the airport's capacity, provides opportunity for growth above the High Density Rule limits as provided under AIR-21 provisions, and ensures that scheduled demand will not reach the levels experienced at the airport beginning in September 2000. The operational benefits are reflected in the significant delay reductions after the lottery results were implemented. For example, the number of flights delayed by 15 minutes or more during July 2001 was 2,434, or about 7 percent of total airport operations for the month. Preliminary data for August 2001 indicates approximately 12 percent of airport operations were delayed. In each of the two months preceding the implementation of the temporary usage policy in November 2000, there were over 10,000 monthly delays, impacting up to 30 percent of total airport operations. Although a limited number of weekday slots have been returned under the temporary usage policy and most of the 21 exemptions reallocated in the August 15, 2001 lottery have not begun service, the FAA does not believe their full operation will significantly alter the current operational environment at LaGuardia. **The operating environment at the airport has improved significantly from one year ago and the unpredictable delay situation prompted by continuing and significant increases in the number of exemption**

flights, which warranted adoption of the policy, no longer exists today.”

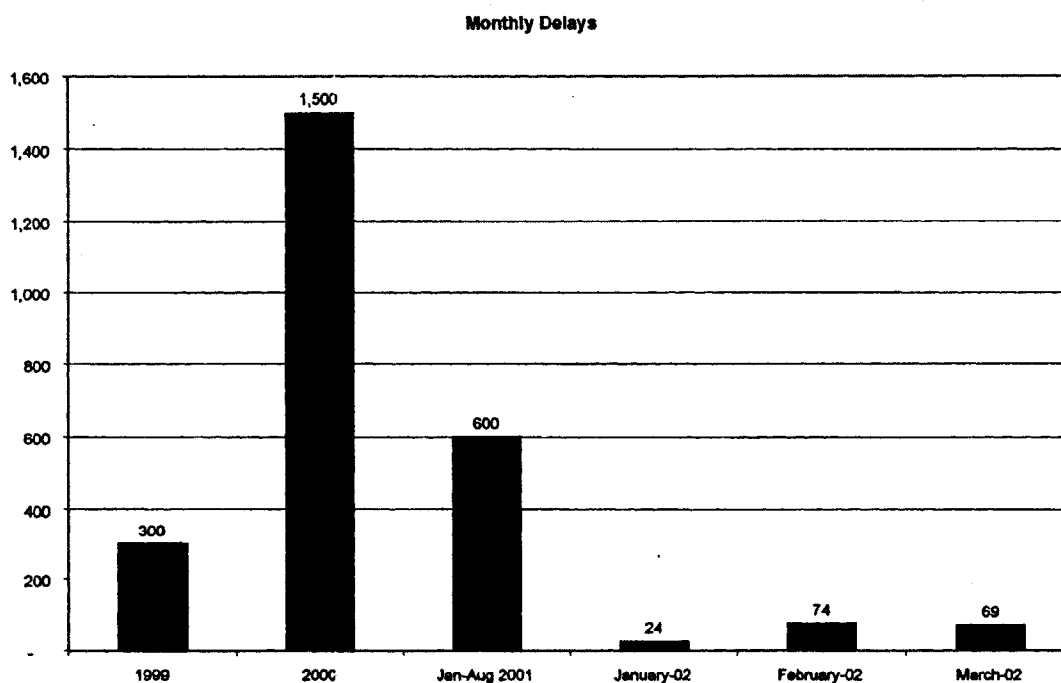
Federal Register, September 18, 2001, page 48158 (emphasis added).

Other actions of the FAA also have contributed to decreases in delays nationwide, and at LGA. The establishment of airport capacity benchmarks has provided important data to the airlines as they make their scheduling decisions. Further, as noted in *Aviation Daily*, the FAA’s “Free Flight program has put several capacity-enhancing tools in place, such as Collaborative Decision Making (CDM), in which airlines and FAA share real-time, weather, operations, and other data that help planners make split-second decisions on, for example, how to avoid bad weather without causing en-route queues. Regular conference calls – every two hours on normal-weather days – between airline planners and FAA’s Herndon air traffic control center have also helped information flow.” These operational improvements, along with the delay data for March and April, 2002, have led one FAA official to believe that the summer of 2002 will be manageable: “We expect a relatively good summer as far as delays go.”⁵

In addition to the FAA’s actions, the airlines have taken steps to help reduce delays. Many airlines operationally addressed the increased delays through various means including waiting for the assigned clearance time, canceling flights, and initiating various unilateral scheduling actions.

⁵ *Aviation Daily*, May 7, 2002.

The data show that there is no current congestion-related delay “problem” at LGA. In 1999, volume-related delays were occurring at a rate of approximately 300 per month. In 2000, that number jumped to 1,500 per month, primarily due to the initial spike in operations after the passage of AIR-21. Once the FAA and the airlines made the appropriate adjustments, the monthly rate of volume delays declined to an average of 600 for the period January through August 2001. In 2002, volume delays at LGA have been 24, 74, and 69 for January, February, and March, respectively.



source: FAA OPSNET reports.

Because the interim cap of 81 operations per hour has aligned volume/operational demand with capacity, no further action to reduce “demand” is needed at this time. ATA believes that the interim cap, which is due to expire on October 26, 2002, should be kept

in place through the expiration of the HDR in 2007, unless the FAA determines that LGA can safely handle more than 81 operations per hour. With the operations cap, there is simply no congestion or delay-based rationale for any other programs to limit operations, including the so-called demand management options proposed in the RFC.

In the coming years, other methods of increasing capacity at LGA, whether from construction of additional facilities,⁶ or through continuing technological advances, should be employed. As 2007 approaches, all concerned parties will be in a better position to evaluate what additional steps, if any, will be needed upon the expiration of the HDR.

The Demand Management Proposals Are Flawed, Unwise And Unworkable

The demand management proposals in the RFC are based on three fundamental premises – that delays at LGA are caused primarily by congestion (that is, insufficient ground capacity); that such congestion-related delays will continue unless the airport is allowed to actively manage demand via some form of economic regulation or intervention; and that economic regulation/intervention by airports can -- and should -- be used to solve the delay problem. These premises are all incorrect, both factually and as theoretical propositions.

⁶ Neither the FAA nor PANYNJ should reject the possibility of expanding runway capacity at LGA.

First, the delays occurring at LGA in 2000 and 2001 were the result of several factors, including but not limited to a temporary spike in volume of operations due to AIR-21. A significant contributor to the delays was, and always will be, the weather. That is why the airlines, the FAA, and the controllers union have spent many hours reviewing, revising, and implementing the strategic planning process that guides the FAA's collaborative decisions on managing the severe weather process.

FAA's OPSNET data reflect the fact that the majority of delays at LGA can be attributed to weather, not volume and congestion. In 1999, there were 28,474 delays at LGA. 15,967 (56%) of these were attributed to weather, while only 3,714 (13%) were caused by traffic volume. In 2000, volume increased and so did delays, but weather was still the most significant cause. Total delays at LGA in 2000 were 61,120. Weather caused 28,950 (47%) and volume caused 18,026 (29%). In the first eight months of 2001, there were 27,280 delays at LGA. Only 5,111 (18%) were caused by volume, while 17,042 (62%) were weather-related. (see Table 1)

Table 1: Delays at LaGuardia

Year	Weather		Traffic Volume		Total
	Number	% of Total	Number	% of Total	
1999	15,967	56%	3,714	13%	28,474
2000	28,950	47%	18,026	29%	61,120
2001*	17,042	62%	5,111	18%	27,820

*Data for the first eight months.

The demand management proposals, of course, are not designed to, and cannot, reduce weather-related delays. Given that the FAA has capped the number of operations

at LGA, further delay reduction efforts would be more productively aimed at technological and operational enhancements to deal with the effects of weather.

Second, as demonstrated above, the current rate of volume delays at LGA has decreased dramatically. With the continuation of the HDR and the slottery, there is simply no need for additional actions, particularly untested and unprecedented local regulation of operations.

The FAA has already determined that “an acceptable level of flights during peak hours at LGA is in the low to mid-1200s...”(RFC at 31732). Moreover, “the FAA reaffirms that the existing cap of 75 scheduled operations is the current practical hourly limit for scheduled flights at the airport (plus 6 ‘other’ general aviation/unscheduled operations), and we believe that any adopted demand management policies should reflect that established operational limit.” (RFC at 31733) As a result, it is these limits -- and not how the slots are allocated among users --that affect the levels of congestion/delay (if any) experienced at LGA. If 81 ops/hr is the appropriate level (as the FAA comment suggests), then *congestion pricing could not be expected to have any impact on delay* -- although it could affect the choices airlines make about aircraft used and routes selected to serve LGA since it would tend to favor flights to/from destinations generating the most price-inelastic passengers. In short, the PANYNJ proposals would contribute nothing to reducing congestion-related delays, and they would tend to push airline service away from smaller and thinner-revenue markets. Moreover, the exemptions for certain operations proposed to respond to this natural tendency would, as discussed below,

undermine the theoretical economic justification for the proposals put forward by the PANYNJ.

Next, as is shown in the attached comments of Daniel M. Kasper, there are significant economic and logical flaws in the proposals put forward by PANYNJ. In fact, the very notion that the proposals would substitute a market-based allocation system in place of the existing slot allocation program is incorrect. As Mr. Kasper notes, the current system, with its active secondary market for slots at LGA, operates effectively and efficiently from an economic standpoint. The demand management proposals in the RFC, because of their flaws, would not enhance economic efficiency.

For example, because the demand management proposals would include significant set asides for administrative allocation to favored users, they depart from their stated economic justification. Any such exceptions from a demand management regime, whether for small communities, general aviation, new entrants, international flights, or any other category, are patently inconsistent with and dilute the economic justification for replacing the current market-based allocation system upon which carriers and communities have relied in investing hundreds of million of dollars to offer LGA services. Using such non-economic criteria for allocating slots and preventing these slots from being bought and sold would reduce efficiency by preventing slots from being put to their highest valued uses. Thus, the use of congestion pricing or auction schemes with these built-in exceptions would produce no reduction in congestion (because the FAA has already set the number of operations at the optimum level), but would result in significantly higher costs for airlines and passengers flying to/from LGA on non-

exempted routes. Under those circumstances, there would be no additional reduction in non-weather related delays at LGA, yet there clearly would be substantially increased costs for airlines and passengers.

Given these flaws, and given the limited contribution of volume congestion to delays at LGA under current regulations, the proposition that economic regulation is necessary is incorrect and unjustified.

PANYNJ also offers no evidence to support its proposed level of congestion pricing. Where are the data to show that the proposed fee structure will, in fact, reduce demand? Because landing fees represent a relatively small portion of an airline's operating costs, it would take a much larger landing fee to have a significant impact on operational decisions. Such increases in landing fees at LGA would mean that carriers serving LGA – and, ultimately, their passengers -- will suffer higher costs without any measurable reduction in delays. The only winner will be the airport proprietor, which will receive perhaps \$500 million or more annually.⁷

As Mr. Kasper concludes,

[N]one of the options identified in the RFC can be accurately described as “market based.” Moreover, all of the proposed options are plagued by serious conceptual and/or practical problems that would prevent them for reducing congestion and delays at LGA and reduce rather than improve the efficient allocation of resources.⁸

⁷ \$500 million is approximately one-fifth of the net profit of the entire airline industry in 2000.

⁸ Comments of Daniel M. Kasper, submitted on behalf of ATA, p. 27.

A recent study by Charles River Associates regarding the likely outcomes of possible delay-reduction mechanisms at San Francisco International Airport provides some insight that is applicable to LGA as well:

Demand management measures such as slot controls, differential pricing of runway access, and gauge controls could, in principle, reduce delays at SFO, but only at the price of increased air fares and reductions in competition and the quality of air service.

If slot controls were imposed, the price of slots at SFO would probably have to be set quite high in order to reduce operations sufficiently to provide significant delay relief; likewise, if differential runway pricing were used, landing fees would have to be increased to several times their current level -- reflecting slot prices.

Each of the demand management measures considered would most negatively affect intra-California air service, particularly commuter carriers flying to and from SFO. A number of cities linked to SFO by commuter carriers likely would lose their air service to SFO while others would see their service frequency curtailed by between 60 and 80 percent.⁹

The various allocation and reallocation scenarios proposed in the RFC have another serious flaw. Any plan under which airlines would receive limited-duration rights, whether through recurring lotteries or auctions, would impair operational certainty and stability, thereby adversely affecting investments in facilities, routes, and personnel.

It would be wrong to establish a radical and inappropriate system of local economic regulation of airline operations, which would impose significant costs on the traveling public, based on the faulty assumptions that there is a congestion-related

⁹ Press Release, April 24, 2001.

problem, and that economic regulation would have a significant impact on the overall level of delays at LGA.

The Demand Management Proposals Are Contrary to Existing Law

While the RFC suggests that the legal implications of demand management need not be discussed at this time, the proposals of PANYNJ raise so many significant issues of law that the ATA believes including a summary of those issues is crucial to an informed consideration of the proposals. It is clear that the demand management proposals could not be put into effect without major revisions to several federal laws and regulations. Further, each of these laws and regulations has important policy underpinnings. The fact that significant revisions would be necessary to allow demand management at LGA demonstrates that the proposals have serious policy deficiencies.

First, the Airline Deregulation Act (“ADA”) prohibits local regulation of routes and services. 49 U.S.C. 41713(b)(1). The ADA provides limited proprietary powers to airports to control noise. 49 U.S.C. 41713(b)(3). Exercise of proprietary powers must be reasonable, nonarbitrary, nondiscriminatory, and not unduly burdensome on interstate commerce.

The demand management proposals would create the risk of an airport proprietor regulating the routes flown and the types of aircraft used by airlines serving LGA. This is especially true of the proposals outlined in the RFC that rely heavily upon elaborate exceptions from market-based demand management pricing options to ensure that slots are allocated to politically-favored users. Thus, the demand management schemes

proposed by PANYNJ would result in precisely the type of local regulation that would lead to the fragmentation of the national air transportation system – and that the ADA was designed to preclude.

The PANYNJ has clearly stated that it wants to regulate the types of aircraft flying into LGA, and the frequency of service at LGA.¹⁰ Such regulation is the very purpose of demand management. Yet it is precisely such decisions – what aircraft to use, and where and when to fly them -- that Congress, through the ADA, has determined should be left to the economic forces of the marketplace, and not to the decisions of local politicians or airport proprietors or the FAA.

Second, federal law requires that landing fees must be reasonable and non-discriminatory.¹¹ One component of reasonableness is revenue neutrality. Revenue neutrality is defined in the Rates and Charges Policy: “Revenues from fees imposed for use of the airfield (‘airfield revenues’) may not exceed the costs to the airport proprietor of providing airfield services and airfield assets currently in aeronautical use unless otherwise agreed to by affected aeronautical users.” (paragraph 2.2).

¹⁰ See, e.g., testimony of William R. DeCota, PANYNJ Director of Aviation, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure on July 16, 2001: “For one, the solution must reduce aircraft operations at LaGuardia to improve schedule reliability and reduce delays. Two, it must encourage efficient use of scarce resources at LaGuardia, i.e. increasing the size of aircraft operating there...”

¹¹ See, e.g., Section 511 of the Airports and Airways Improvement Act of 1982 (49 U.S.C. § 47107); Section 113(b) of the Federal Aviation Act of 1958, (40 U.S.C. § 40116); and the FAA Authorization Act of 1994.

The demand management proposals put forth by the PANYNJ would not be revenue neutral. In order to accomplish the goal of affecting airline decisions on aircraft usage and frequency of service at LGA, the fees would have to be set at levels much higher than those currently in use. In fact, the landing fees would be set without regard to the cost of providing airfield services. These landing fees would not meet the test of reasonableness.

Third, because the landing fees would not be based on airfield costs, they would also fail to meet another crucial test of reasonability. The Rates and Charges Policy requires that landing fees must be based on the direct costs associated with the operation and maintenance of airfield assets. These assets include runways, taxiways, navigation equipment and land dedicated to airplane operations. DOT requires that these assets be valued on the basis of historical costs, not opportunity costs. Costs imposed by congestion and other externalities cannot be considered in the calculation of the cost base and hence cannot be recovered in landing fees.

Fourth, PANYNJ has stated that another goal of its demand management proposals is to make sure that access is preserved for new entrant airlines and for service to underserved communities.¹² This goal cannot be accomplished through landing fees. Landing fees cannot be discriminatory. As noted above, an airport proprietor may not use landing fees – or exemptions -- to regulate routes and services of an air carrier.

¹² Testimony of William R. DeCota, PANYNJ Director of Aviation, before the Subcommittee on Aviation of the House Committee on Transportation and Infrastructure on July 16, 2001

Further, any use of differentiated landing fees and exemptions to subsidize the operations of an air carrier is prohibited by the Department of Transportation's Policy on the Use of Airport Revenue.¹³

Fifth, demand management schemes such as those proposed by PANYNJ are contrary to the policy of our national aviation system. 49 U.S.C. 47101(a)(9). Here, there is no evidence that the artificial restrictions proposed by PANYNJ, which are clearly designed to discriminate among categories of aircraft, are reasonable, workable, or necessary. Further, because the proposed demand management options would add significant cost to the traveling public, without any demonstrated benefit, they are not in the public interest.

Sixth, to the extent that a demand management plan affects the rights of slot holders at LGA, it may be considered by the courts to be an unlawful or compensable "taking" of a property right. Although the allocation of takeoff and landing slots was once viewed by the courts as not conferring upon the holder any associated property right (see In re Braniff Airways, Inc., 700 F.2d 935 (5th Cir. 1983)), courts have leaned in the opposite direction since the government's adoption of a "buy/sell" approach toward slots. See In re McClain Airlines, Inc., 80 B.R. 175 (Dist. Ariz. 1987); In re Gull Air, Inc., 890 F.2d 1255 (1st Cir. 1989). And the debt and equity markets have come to treat slots as assets that can be conveyed or burdened with security interests just like other valuable

¹³ Department of Transportation, Federal Aviation Administration, Docket Number 28472, Policy and Procedures Concerning the Use of Airport Revenue, Federal Register 64(30), p. 7696-7722, February 16, 1999.

property. The trend toward recognizing slots as property interests brings with it the likelihood that due process issues will now receive greater attention when the beneficial use of a holder's slot is affected, adding a further degree of complication to any proposed demand management option.

Conclusion

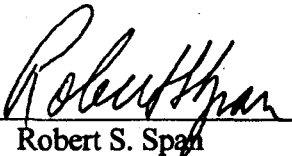
For all the above reasons, FAA should not implement any of the demand-management proposals, or any other new demand management strategies, at LGA. FAA should retain the cap on operations, through the expiration of the HDR. Until 2007, other methods of enhancing capacity at LGA should be studied and employed.

Dated: June 20, 2002

Respectfully submitted,

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ECONOMIC ANALYSIS OF ALTERNATIVE POLICY OPTIONS
FOR MANAGING CAPACITY AT LAGUARDIA AIRPORT

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LECG, LLC
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JUNE 20, 2002

DOCKET NO. FAA-2001-9854

A. Introduction

- 1) My name is Daniel M. Kasper. I have been retained by the Air Transport Association of America (ATA) to provide an independent economic analysis of various options and proposals contained in the Federal Aviation Administration's (FAA) request for comments, Docket No. FAA-2001-9854, in the matter of "Notice of Alternative Policy Options for Managing Capacity at LaGuardia Airport and Proposed Extension of the Lottery Allocation" (the "RFC"). My analysis is summarized in these comments.
- 2) I am currently a Managing Director of LECG, LLC, a firm that provides expert analysis and consulting services in economics, accounting and finance. The firm has domestic offices throughout the United States and six international offices. I am also Director of the Cambridge, MA office. From August of 1993 until November of 1997, I was a Partner and Chairman of the Transportation Industry Program at Coopers & Lybrand, LLP. Prior to that, I was vice-president, Corporate Director, and Head of the Transportation Practice for Harbridge House, Inc. I have served as Director of the Bureau of International Aviation at the United States Civil Aeronautics Board (CAB), and on the faculties of the Harvard Business School and the University of Southern California's Graduate School of Business Administration where my teaching and research focused on governmental regulation of business activities. In 1993, I was appointed to the U.S. National Airline Commission. I received a Juris Doctorate with a concentration in law and economics and a Masters

in Business Administration degree from the University of Chicago and a Bachelor of Arts degree from the University of Kansas.

B. Background

- 3) With the exception of four airports currently subject to the “high density rule” (HDR),¹ runway access has been allocated historically on a “first come, first served” basis.² Airport runway (and other airfield) costs are typically recovered via weight-based landing fees set at the level required to recoup the actual airfield costs incurred by the airport to provide, maintain and operate the airfield.
- 4) When available runway capacity is sufficient to accommodate all existing demand—as is typically the case at most U.S. commercial service airports—“first come, first served” is widely accepted as the least costly way of attaining an efficient allocation of runway resources.
- 5) When demand for access to an airport’s runways exceeds the existing capacity of those runways for a significant period, there are three basic options for dealing with excess demand:
 - i) Build new runways to increase capacity;
 - ii) Impose operational limits (demand management) consistent with available capacity; or

¹ Airports currently subject to the HDR are LaGuardia (LGA), Kennedy (JFK), O’Hare ORD) and Reagan Washington National (DCA). ORD will no longer be subject to the HDR as of July 1, 2002.

² Federally-imposed administrative limits on operations at certain other airports were temporarily imposed following a strike by air traffic controllers, but these restrictions were subsequently lifted.

- iii) Impose no limits on operations (except those required for safety) and permit the “first come, first served” system to determine the delay equilibrium.

With regard to the first two options, although volume-related delays might be reduced by the use of “demand management” techniques, the failure to add runway capacity can be expected to lead to reduced economic efficiency and lower societal economic welfare under circumstances like those in the present case – i.e., where user demand is more than sufficient to justify new runway capacity. And while the “first come, first served” approach can be the best economic option (i.e., produce the most efficient results) at airline hub airports, as explained below, it is unlikely to be a realistic option for LGA.

- 6) It is important to recognize, however, that not all congestion or delay is inefficient because, as with any product, there is an efficient level of delay.³ That is, delay becomes an economic problem only when “social” costs resulting from use of a congested runway (including delays imposed on other aircraft and passengers) exceed the private costs (i.e., the costs borne by those seeking to use the runways when they are congested). Hence, a “first come, first served” approach is unlikely to lead to excess volume-related delays at major airline hubs because the costs of such delays would be borne (i.e., “internalized”) largely by the hubbing carriers themselves. As a

³These are delays that would be too expensive to eliminate; that is, delays that users would be willing to tolerate rather than pay enough to eliminate them. For example, airlines (and their customers) would be unwilling to eliminate the possibility of weather-related delays because the cost—limiting the number of flights year round to the level that could be operated in bad weather conditions—would be too high for airlines and their customers.

result, there is likely to be little divergence between private costs and social costs at such hubs.⁴

- 7) Where demand for runway access at non-hub airports exceeds capacity, however, allocating access on a “first come, first served” basis can lead to volume-related delays forcing aircraft into aerial or ground holds that increase costs and reduce efficiency.
- 8) When operational limits are imposed to limit demand under these circumstances, questions arise as to how the now-limited access rights should be allocated. The options can be categorized as either market-based or non-market based. Non-market approaches include “grandfathering” rights to existing users, administratively allocating such rights (e.g., by DOT’s exemption authority) or distributing access rights via lotteries, such as the one implemented in 2000 to allocate certain slots at LGA. In contrast, market-based approaches rely on prices and markets to allocate scarce resources. Examples include the use of congestion-based landing fees, auctions and, importantly, secondary markets.⁵
- 9) Regardless of how the scarce access rights are allocated *initially*, a secondary market—where slot holders are free to buy, sell and/or lease their slots—is essential to ensure that slot resources continue to be efficiently allocated. Indeed, a secondary market is sufficient *by itself* to ensure the efficient allocation of slots, as discussed below.

⁴ See, “The Problem of Social Cost,” by Ronald Coase, *Journal of Law & Economics*, 1960, pp. 1-44, for the seminal treatment of social costs. See also, “Network Effects, Congestion Externalities, and Air Traffic Delays: Or Why All Delays are Not Evil,” by Christopher Meyer and Todd Sinai, University of Pennsylvania, Wharton School, Unpublished Manuscript, October 2001.

⁵ For reasons set out in subsequent paragraphs, it is important to note that none of the options put forward in the RFC—including those relying on congestion-based landing fees and auctions—is truly market-based.

- 10) Runway access rights at HDR airports including LGA were initially allocated to the carriers then serving each airport (i.e., “grandfathered”) based on each carrier’s level of service at that airport when the buy/sell rule was adopted.⁶ As additional operations became possible, new access rights have been allocated by DOT, typically via its discretionary (exemption) authority and by lottery.
- 11) The current proposals were promulgated in response to the sharp increase in flight delays at LGA following the passage of legislation (AIR-21), which partially overrode prior limits on the number of flight operations at LGA and authorized a substantial increase in scheduled flights at that physically-constrained facility. As a result of the increase in operations, the FAA was forced to re-impose caps on the operations at LGA that were authorized by AIR-21. In addition, the FAA is now considering “two general types of market-based solutions to manage demand and allocate capacity” at LGA (congestion-based landing fees and auctioning take-off and landing rights) as well as several “administrative” allocation options.⁷
- 12) I am aware of no commercial airports where runway access rights are allocated solely—or even principally—by means of auctions or landing fees.⁸ This is not surprising in light of the considerable complexities that would be entailed by—and

⁶ Although slots at HDR airports were initially allocated to the carriers then operating them, most of the slots currently held by airlines serving LGA (and other HDR airports) appear to have been acquired—often at substantial prices—by their present owners. Both of the existing LGA shuttle services, for example, were acquired since the advent of buy/sell. Likewise, all of the slots formerly held by Eastern (which held approximately 25% of LGA slots prior to the sale of the Shuttle in 1989), Pan Am (which once held approximately 10% of LGA slots), and TWA (approximately 6%) were acquired by subsequent purchasers.

⁷ Docket FAA-2001-9854-1 at 31736.

⁸ Thus, even London’s Heathrow and Gatwick airports, where landing fees substantially exceed the airports’ actual (historic) costs, runway access requires airlines to hold time-specific slots. These slots were initially allocated based on historical usage. Subsequent users have acquired slots via acquisition (e.g., AA and UA by acquiring TW and PA’s U.S.-LHR rights) or by administrative allocation as new slots have been created.

problems that would result from—the use of either auctions or congestion fees to allocate airport access rights, as discussed below.

C. The Options Identified in the RFC Fail to Satisfy the Conditions Necessary for Efficient Resource Allocation

- 13) Economists typically favor market over non-market allocation methods because experience has shown that markets tend to allocate resources more efficiently (i.e., put resources to their highest valued uses) than non-market methods.
- 14) In the short run, well-designed market-based mechanisms allocate scarce resources to those who value them the most, and hence, can be expected to produce the most economically valuable use of those resources. In contrast, non-market based methods such as lotteries or queuing allocate scarce resources randomly or on the basis of non-economic criteria. These methods are typically less efficient than market based methods because they allocate scarce resources to less economically productive uses and users. Hence, resources allocated using non-market methods are typically *not* put to their highest valued economic use, a criticism that would clearly apply to the exemptions, lotteries and other non-market based allocation methods that would be used by the various options to allocate a significant portion of LGA slots to politically favored users.
- 15) Market-based allocation methods also tend to encourage the efficient allocation of resources in the long run because, as capacity becomes scarce, rising prices are likely to attract the capacity-increasing investments needed to drive prices down to long run

competitive levels. Thus, market-based allocation methods can provide valuable signals that new investment is needed.⁹

16) Unfortunately, all of the options identified in the RFC fail in important respects to satisfy the conditions necessary for market-based systems to allocate resources efficiently. As a result, adopting any of the options will not produce a more economically efficient allocation of scarce runway (and other) resources than is provided by the existing secondary market.

17) For example, each of the options set out in the RFC would use administrative or political criteria rather than relying on “market-based” criteria (i.e., prices) to allocate a significant portion of the available slots. As a result, these slots would clearly *not* be available to those users who valued them most highly. But exempting more scarce resources (here, runway access rights) from market allocation cannot lead to improved efficiency.¹⁰ Since efficiency depends on the allocation of resources to their highest valued uses, the options described in the RFC would not, by definition, produce an economically efficient allocation of resources.

18) In addition, none of the options appears to contemplate a role for—or even to recognize the critical importance of—the secondary market in ensuring the efficient allocation of scarce runway access rights. Instead, the various options outlined in the RFC either ignore the secondary market or would preclude efficiency enhancing slot transfers that the secondary market presently makes possible.¹¹ Although well-

⁹ As discussed below, however, even this theoretical virtue is open to considerable doubt in the case of LGA since both the need for new capacity and the inability (or unwillingness) to provide it have been apparent for many years.

¹⁰ The extent of the efficiency losses will depend on the magnitude of the political exemptions which, in the present case, are substantial.

¹¹ See Docket FAA-2001-9854-1 at 31739, for example, which would apparently permit only one-for-one slot swaps but not sales.

designed auctions or landing fees could, in theory, produce an efficient initial resource allocation,¹² on-going (i.e., “dynamic”) efficiency requires a cost-effective means of reallocating resources as market conditions and participants change. Hence, the ability to exchange resources in a secondary market is essential to maintaining overall efficiency.¹³

19) As a result of its exclusive focus on LGA, the RFC also fails to consider the implications of its proposals for the overall efficiency of the U.S. air transportation system. Thus, the RFC makes clear that its aim is to “improve the efficient use of [LGA’s] capacity...”¹⁴ But economic efficiency cannot be enhanced by focusing on the operations of a single airport¹⁵ because efficiency depends upon the operation of the national air transportation system as a whole.¹⁶ In short, optimizing the use of LGA’s capacity is not the same as—and is likely to be inconsistent with—the most efficient overall utilization of resources. Notwithstanding its importance, LGA is only a single element of the far broader, integrated national air transportation system. And it is one of the most basic principles of systems theory that optimizing the performance of any single component (or subset of components) of a broader system

¹² For reasons set out below, none of the options identified by the RFC would produce a more efficient allocation of access rights than that which exists under the current allocation system. But by taking slots from current uses/users and reallocating them to other uses/users, adoption of the RFC options could cause a significant disruption to existing services and service patterns.

¹³ There are numerous examples of secondary markets throughout the economy. These include the major stock, futures and commodities exchanges, as well as more recent creations like eBay.

¹⁴ See Docket FAA-2001-9854-1 at 3174.

¹⁵ In addition, the RFC would apply market-based allocation (i.e., pricing) to only a single component of a highly integrated aviation system that includes many other airports and the ATC system. In order to utilize a time-specific landing slot at LGA, however, an aircraft operator also needs timely access to and through the air traffic control (ATC) system and, in some cases, access to appropriately timed slots at another HDR airport. Yet the RFC is silent on the question of what ATC priority, if any, slot purchasers would have, an issue that is likely to be critical to the workability—and value—of all the options identified in the RFC.

¹⁶ I note, in this regard, that the Department of Transportation has initiated a separate proceeding that deals more broadly with the issue of access at other airports.

is not the same as—and is typically inconsistent with—optimizing the efficiency (or the output) of the system as a whole.¹⁷

D. Access to LaGuardia Is Already Subject to a Market-Based Allocation System

20) At present, the secondary market that exists in the United States for the purchase, sale and/or leasing of slots at LGA and (the other HDR airports) is the only thing approaching a fully market-based system for airport access rights.¹⁸ *In short, runway access rights at LGA (and other HDR airports) are already subject to a market-based allocation system.*

21) Although the principal justification for using a market-based system to allocate runway access is to ensure the efficient allocation of scarce resources, the RFC fails to acknowledge that access rights at LGA are already subject to a market-based allocation system—and have been since the adoption of the buy/sell rule in 1985. Nor does the RFC attempt to explain why—or how—efficiency would be enhanced by replacing the existing market system with one of several new, untested systems that would rely less on market-based allocation than does the current (buy/sell) system.

22) The ability of airlines to acquire slots at LGA (and other HDR airports) in the secondary market currently provides an on-going mechanism for reallocating these scarce slot resources to new and more productive uses and users.¹⁹ As explained by

¹⁷ This principle simply illustrates the point that maximizing the value of the entire system's output is more important than—and does not necessarily require—maximizing the output of any single component of the broader system.

¹⁸ Since 1985, carriers have been permitted to buy, sell and/or lease slots at HDR airports. See Amendment 93-49, 50 Fed Reg 52195.

¹⁹ Secondary markets have also been adopted to reallocate scarce resources in other regulatory contexts. E.g., The Clean Air Act permits the purchase and sale of emission credits in order to reduce emissions as cheaply and efficiently as possible.

the FTC Bureau of Economics in an earlier filing: “An economically efficient solution...would limit the use of the resource and allocate right of use to those who value them highest. The HDR...[has] largely accomplished this by creating a slot market ...[that] allowed slots to be transferred to carriers with the most highly valued flights. Other things equal, the value of a given flight rises as consumer demand for the flight rises. Thus, the slot market—that is, the ability of carriers to buy, sell and lease slots freely—helps ensure that the flights offered are those that consumers value the most.”²⁰

23) Further, FAA slot data indicate that the market for slots at LGA is reasonably active. During the six-month period from March to August of 2001, for example, the FAA recorded approximately 1,328 slot transactions (leases and sales).²¹ Four hundred and twenty (420) of these transactions involved weekday slots. Based on 1,296 daily slots, this is *equivalent* to approximately one-third of all weekday slots being transacted once during this six-month period. The turnover for weekend slots is equivalent to a turnover of about 30 per cent of available weekend slots. And slot transactions do not appear to be limited to large network carriers.²²

²⁰ *Study of the High Density Rule*, Comments of the Staff of the Bureau of Economics of the Federal Trade Commission, Docket No. 27664, November 23, 1994, at 7. “The HDR was adopted in order to allocate existing capacity. If that capacity is known and reflected in the hourly slot quotas, the prices at which slots trade will fluctuate as demand fluctuates: higher prices during high demand periods, and lower prices during low-demand off-peak periods. Thus, given the level of capacity, market forces will lead naturally to peak and off-peak prices. To implement [such] slot-based regulation, the only information that regulators or airport administrators need is an estimate of the capacity of the airport. Since airport capacity does not generally change from day to day or hour to hour, the degree of regulatory oversight necessary to administer slot-based regulation is modest.”

²¹ The FAA does not include one-for-one slot trades when counting transactions. If those transactions are included, the total number of slot transactions would be approximately 3,100 (rather than 1,328).

²² Source: LECG analysis of FAA slots data. Based on 1,296 daily slots. See Docket FAA-2001-9854-1 at 31747. Note that because some slots have been leased or sold more than once during this six-month period, the actual number of unique slots involved in transactions will be somewhat lower.

24) Nor does the buy/sell system appear to have imposed an unfair or disproportionate burden on new entrants. As the FTC observed: “HDR [including buy/sell] promotes rather than limits new entry because it creates a market in which potential new entrants can obtain operating privileges.”²³ By permitting slot holders to convert their slot holdings into cash, moreover, buy/sell provides incumbent slot holders with strong incentives to sell slots to those—including new entrants—who are willing to pay more for the slots than incumbents expect to earn by retaining them.²⁴

E. Concentration at LGA is Lower Than At Comparable Airports

25) Although it is often assumed that the combined effect of HDR and buy/sell has caused LGA (and other HDR airports) to become more concentrated than airports not subject to HDR, that assumption is not correct. In fact, concentration at LGA is lower than at most other large, non-hub airports, as shown in the Table 1, below.

²³ *Study of the High Density Rule*, Comments of the Staff of the Bureau of Economics of the Federal Trade Commission, Docket No. 27664, November 23, 1994, at 2.

²⁴ Indeed, the increase in new entry—particularly with small jet aircraft—has been so great as to prompt the inclusion of an option in the RFC that would permit the imposition of minimum aircraft size limits at LGA. In addition, all of the recent exemptions from HDR at LGA have been awarded to new entrants and small carriers. As a result, such carriers currently operate a significant share of slots at LGA.

Table 1: HHIs at The Largest 15 Non-Hub Airports, 2001

Airport	HHI	O&D Rank
OAK	4,426	14
MDW	3,057	11
SJC	2,261	13
BWI	2,203	6
HNL	2,125	12
DCA	1,875	10
SAN	1,870	9
SEA	1,832	5
JFK	1,700	15
LGA	1,676	3
BOS	1,674	4
TPA	1,410	8
MCO	1,408	2
FLL	1,378	7
LAX	1,348	1
Mean	2,016	
Median	1,832	

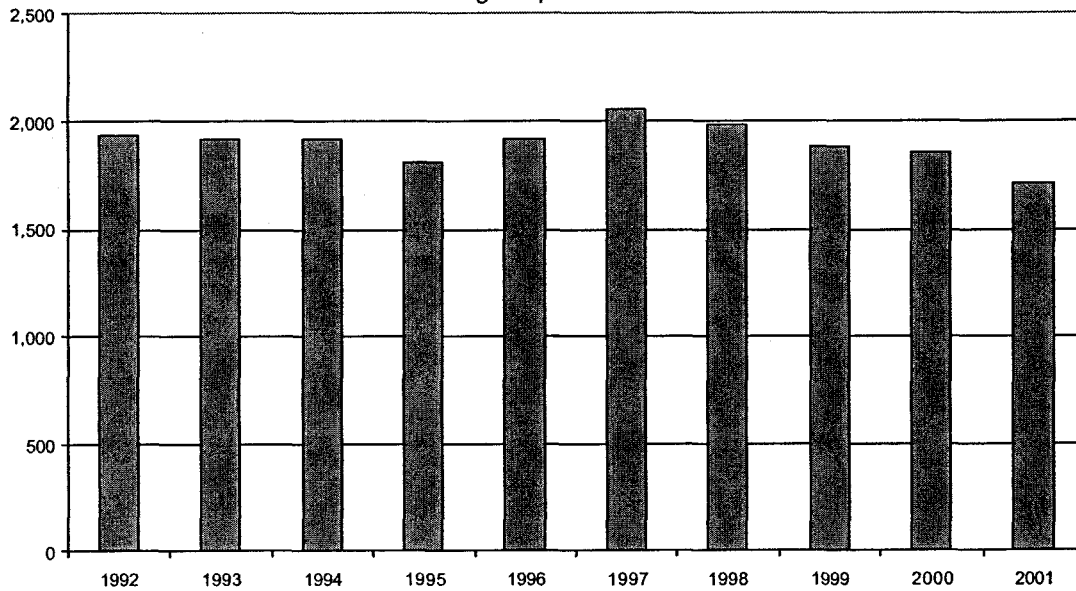
Notes: HHIs based on domestic O&D passengers.
Source: U.S. DOT DBIA Database.

26) In addition, concentration at LGA has declined in recent years—whether measured by actual slot usage (arrivals and departures) or slot ownership. In terms of LGA slot usage, the HHI in 2001 was at its lowest level in a decade, as shown in Figure 1 below, while the HHI based on slot ownership fell from 1,747 in 1993 to 1,661 by April of 2001.²⁵ Likewise, concentration measured in terms of O&D traffic at LGA for 2001 was 1,680, a level that was lower than the 1996 HHI level of 1,720.²⁶

²⁵ Source: 1993 HHI is from “Study of the High Density Rule,” Docket No. 27664, U.S. Federal Trade Commission, November 23, 1994; 2001 HHI was calculated by LECG based on FAA slot data for April 2001.

²⁶ The average HHI for 1994-2000 using O&D traffic at LGA was 1,674 compared to 1,680 for 2001. Source: LECG analysis of US DOT data.

Figure 1
HHI of LGA Flight Operations: 1992-2001



Notes: Aircraft Departures and Arrivals at LGA. Source: U.S. DOT T-100 Database.

F. The RFC Options Would Neither Reduce Delays Nor Help Add Runways

27) Perhaps the main benefit relied upon to justify the use of market-based allocation methods is the expectation that it would alleviate the excess demand and volume-related delays that can occur when prices are artificially restrained.²⁷ In the present case, the reductions are apparently expected to result from increasing prices to a level where the demand for runway access equals the number of hourly flights that can be accommodated by the existing runways.

28) Although it may be true, as a matter of general economic principle, that charging higher prices will lead to reduced demand (and, thus, delays), it is highly unlikely to

²⁷ See Docket FAA-2001-9854-1 at 31741.

be true in the case of LGA *because the potential for excess demand has already been addressed by the imposition of a cap on the number of permissible operations at LGA.*²⁸ Since the FAA has already dealt with the potential for excess demand (and volume-related delays) at LGA by capping operations at the airport's "practical hourly limit," none of the proposed options can reasonably be expected to have any appreciable effect on reducing delays at LGA.

29) Another reason frequently cited for using a market based allocation system is its ability to signal the need for—and thereby to attract—new investments that would increase capacity. But that information is already available (or could readily be obtained) from the existing slot market, so the need for such information does not justify the RFC options over the existing market based system.

30) Moreover, as the FAA itself has acknowledged, no new runway capacity is likely to be added at LGA—whether or not any of the proposed options is adopted.²⁹ Under these circumstances, it is wholly unrealistic to assume that the adoption of a different market-based allocation system would be necessary—or even helpful—in adding runway capacity at LGA or elsewhere in the NYC metro area.

31) Finally, adopting any of the "market-based" allocation options identified by the RFC would create economically perverse incentives for the airport proprietor, a fact that has been well recognized by other jurisdictions that have considered permitting airports to levy "market-based" access charges. As noted in a study prepared for the European Commission: "[A]irports are often monopoly providers of service within

²⁸ The FAA has specifically indicated that the current "practical hourly limit" at LGA is 81 operations per hour—the number currently authorized—and that "any adopted demand management policies should reflect that established operational limit." See Docket FAA-2001-9854-1 at 31733.

²⁹ See Docket FAA-2001-9854-1 at 31732.

their particular regions, and there is a risk that they will have an incentive to underinvest in capacity in order to exploit their monopoly position... If all revenue were collected by airport operators it would generate large financial surpluses which may blunt [their] incentives for efficient behavior, including the investment needed to relieve the constraint.”³⁰ Likewise, authorities in Australia concluded “while higher airport charges may signal clearly the need for new investment, that investment may not be forthcoming if the airport retains the scarcity rents.”³¹ For these reasons, among others, DOT has promulgated a policy on rates and charges applicable to U.S. airports. Yet, notwithstanding such concerns, the RFC would apparently permit the proprietor of New York City’s three major airports to increase significantly the prices charged to its largely captive customers and thereby to capture the scarcity rents arising from the failure to expand runway capacity.³²

F. Probable Effects of Implementing the RFC’s Demand Management Options

32) What would be the likely effects of adopting “demand management” policies at LGA when, as discussed above, they cannot reasonably be expected to reduce delays and when access rights are already subject to a market-based allocation/reallocation

³⁰ *The Role of Market Mechanisms in Airport Slot Allocation*, a report prepared for the European Commission by Coopers & Lybrand, Chris Castles, at 11, 1997.

³¹ *Price Regulation of Airport Services, Inquiry Report of the Australian Productivity Commission*, January 2002, at 442. “[W]hile market clearing prices may provide good signals to airports of where new capacity is desired, they may not provide good incentives to actually deliver it at the socially desirable time,” quoting from UK CAA, *Heathrow, Gatwick, Stansted and Manchester Airports’ Price Caps*, November 2001, p. xiv.

³² Any scarcity rents arising from the establishment of the HDR at LGA were captured long ago by the original slot holders when they sold those slots. For subsequent acquirers, the cost of slots represents a significant capital investment, specific to LGA.

system? *Although some of the specific effects would vary depending on which of the various “demand management” options is adopted, it is difficult to escape the overall conclusion that the main result would be to transfer revenues from airlines to the proprietor of LGA—without alleviating either delays or adding runway capacity at LGA.*³³

33) In addition, all of the proposed options would entail:

- a) Taking slots from current holders and redistributing those slots to other users.³⁴
- b) Administrative allocation of a significant proportion of all slots—to certain politically favored categories of carriers and/or communities—based on regulatory criteria not used since the passage of the Airline Deregulation Act. These administrative “set asides” under the various options identified in the RFC are considerable. The auction option, for example, would administratively allocate more than 36% (476 out of 1,296) of all LGA slots.³⁵ In short, a significant portion of the scarce slots at LGA would be exempted from the market-based allocation principles that are the purported rationale for the RFC’s proposals.
- c) Establishment of a new bureaucracy to administer the “demand management” system.
- d) The imposition of significant costs on airlines and their customers.³⁶

³³The RFC’s market-based options would allow PANYNJ to collect additional revenues (from slot auctions or congestion based landing fees) far in excess of its current revenues from landing fees and far in excess of that required to recoup the costs incurred to develop and operate LGA.

³⁴ This could give rise to “takings” claims that expose the FAA to substantial potential liabilities. See also, Comments of the Air Transport Association of America, Docket No. FAA-2001-9854, at 18.

³⁵ See RFC at p. 31747.

³⁶ The adoption of any RFC option(s) is likely to lead to more frequent turnover of carriers and services at LGA and could thus be expected to impose considerable costs on carriers (who have made significant investments in facilities at LGA), on their LGA based employees (who could be dislocated) and on travelers (by disrupting existing service patterns). These disruptions cannot be justified as being necessary to improve economic efficiency since, as discussed in Section E, above, their adoption is more likely to lead to efficiency reductions.

G. Issues Raised by the Specific Demand Management Options

Option A: Congestion-Based Landing Fees

34) For a number of reasons, the RFC's congestion pricing proposals are more likely to reduce—rather than enhance—economic efficiency. First, there is little or no economic advantage from using congestion fees when the optimal number of operations has been already determined.³⁷ In the case of LGA, the FAA has determined that the maximum sustainable level of operations at LGA is 81 per hour,³⁸ so there is no need—and considerable economic risk—in trying to determine what fee structure would produce 81 flights per hour. While the airport proprietor (or FAA) seeks to find the market clearing landing fees, the results would likely be either a significant waste of scarce slot resources from setting prices above efficient levels or increased congestion delays when landing fees are set below efficient levels. “[W]hether or not a regulatory body or airport administrator would (or could) choose the appropriate levels of peak and off-peak prices both to avoid congestion and to utilize capacity optimally is not clear.”³⁹

³⁷ Although “[s]ome critics promote the use of price rather than quantity, this is, slot regulation as the appropriate regulatory instrument, [t]he underlying reason for this preference is not always clear. While *market* prices are superior economizers of information compared to administratively set output levels, *administratively set* prices do not necessarily possess the same advantage (citation omitted).” FTC, 1994, at 49. The FTC further notes “If that capacity is known and reflected in the hourly slot quotas, the prices at which slots trade will fluctuate as demand fluctuates: higher prices during high demand periods, and lower prices during low-demand off-peak periods. Thus, given the level of capacity, market forces will lead naturally to peak and off-peak prices. To implement [such] slot-based regulation, the only information that regulators or airport administrators need is an estimate of the capacity of the airport. Since airport capacity does not generally change from day to day or hour to hour, the degree of regulatory oversight necessary to administer slot-based regulation is modest.”

³⁸ See Docket FAA-2001-9854-1 at 31745.

³⁹ FTC 1994, at 49.

- 35) Moreover, because demand for LGA slots will vary based on the time of the year as well as changing economic circumstances, congestion fees would have to be changed frequently in order to continually clear the market.⁴⁰ Under these circumstances, it is not clear when, if ever, an efficient equilibrium level of landing fees would be reached.⁴¹
- 36) In addition, determining market-clearing congestion fees is not a simple matter, and such fees would have to be recalculated frequently in pursuit of an ever changing equilibrium price level caused by constant changes in competitive and economic conditions. "In practice, there may be difficulties in estimating and setting accurately the structure and level of airport charges which would match supply and demand for airport capacity taking into account the peak profile of demand."⁴² As a result, the administrative costs required to operate a system of congestion-based landing fees would be substantial.⁴³
- 37) In conclusion, there is little economic justification for implementing the RFC's congestion fee options since they would neither help alleviate delays nor result in a

⁴⁰ "The amount of information required to implement peak and off-peak pricing may be formidable...[T]he demand for air travel (both at peak and off-peak times) will fluctuate with changes in the business cycle, seasonally, and as a result of purely random events such as terrorist threats and the weather. If administratively determined prices cannot respond quickly to cyclical and random changes in peak and off-peak demand, the welfare of air travelers may be reduced. If prices are set too low, travelers may be faced with congestion and congestion related delays; if prices are set too high, airport capacity may be underutilized as the number of operations falls below levels necessary to control congestion." Ibid, at 49.

⁴¹ And to the extent that runway congestion and delays at LGA are caused by the vagaries of weather or unpredictable ATC problems, they could not be alleviated by a system of congestion fees: Since it is impossible to predict when such delays will occur, it would be impossible to know far enough in advance to affect airline flight schedules either when to impose such fees or at what level they would need to be set to reduce operations to the airport's reduced capacity.

⁴² Castles, Coopers & Lybrand, op cit, at 11.

⁴³ As with other airport costs, these administrative costs would be borne by airport users – including airlines, passengers and shippers.

more efficient allocation of slots at LGA. Thus, “it appears likely that such a pricing structure is not superior to slot-based regulation.”⁴⁴

Option B: Auctions⁴⁵

38) Although auctions could avoid some of the problems that plague congestion-based landing fees, the auction options proposed in the RFC pose significant problems that raise substantial doubts as to the feasibility and likely benefits of slot auctions.

39) First, if the number of slots remains at its current level (81/hour), as the RFC appears to contemplate, auctions would not reduce the number of operations and, hence, there is no reason to expect that an auction system for allocating slots would reduce delays or runway congestion at LGA.⁴⁶

40) Moreover, the design and management of an efficiency enhancing slot auction would entail considerable expertise and expense and would require sophisticated software and bidding facilities. The complexities in designing an economically sound slot auction arise principally from the interdependencies inherent in the airline business. That is, “there are strong interdependencies between the values of different slots, which are only useful to an airline as a component of a viable schedule. The schedule establishes the relationships between connecting services and it is these relationships

⁴⁴ FTC, 1994 at 50.

⁴⁵ My analysis of auction theory and practice relies, in part, on analysis provided by my LECG colleague, Darin Lee, Ph.D, an expert in the fields of auctions and game theory.

⁴⁶ Nor, as explained in Fn. 42 supra, can auctions be expected to help alleviate congestion and delays resulting from unpredictable weather or ATC problems.

which determine the value of slots to individual airlines.”⁴⁷ These interdependencies mean that the value an airline serving LGA-DCA places on a 7:00 AM departure slot from LGA, for example, will depend critically on whether or not it also holds an 8:00 AM arrival slot at DCA. Similarly, there are important complementarities between different slots at the *same airport* across different times of the day. For example, the value an airline places on an arrival slot will depend on whether or not it is able to secure a corresponding departure slot later in the day.

41) It is well known—both from a theoretical perspective as well as from the experience with numerous radio-spectrum auctions worldwide—that simultaneous auctioning of related resources is efficiency enhancing because it allows firms to aggregate portfolios of complementary resources.⁴⁸ Thus, an efficient auction for slots at LGA would require that all LGA slots be auctioned simultaneously. Moreover, in order for an auction to be able to efficiently allocate access rights, it would require the simultaneous auctioning of access rights at all slot-constrained airports, which would add considerably to the cost and complexity of the resulting auction.

42) To be fully efficient, an auction should also permit airlines to submit package bids (i.e., to make bids conditional on winning matched “pairs” of take-off and landing slots at different airports or sets of slots at the same airport).⁴⁹ But package bidding

⁴⁷ Castles, *op cit*, at 10.

⁴⁸ See for example, “The Efficiency of the FCC Auctions”, by Peter Crampton, *Journal of Law & Economics*, 41, pp. 727-736, October 1998 or “Synergies in Wireless Telephony: Evidence from the Broadband PCS Auctions,” by Larry Ausubel, Peter Crampton, Preston McAfee and John McMillan, *Journal of Economics and Management Strategy*, 6:3, 497-527, 1997.

⁴⁹ For example, airlines should be able to bid for a matched slot pair involving a departure at LGA and an arrival at DCA. Likewise, they should be able bid on a portfolio of arrival and departure slots at LGA which best fit their overall network schedule.

would require an extremely complex auction. "The rules for a [slot] auction that took account of this interdependence would therefore [have to] be highly complex in order to allow, for example, for multiple contingent bids with different values bid depending on the complementary services under different outcomes from the overall auction. In practice, no such auctions have ever been implemented."⁵⁰

43) Although there has been much research on the potential efficiency gains of package bids,⁵¹ they have yet to be implemented in any major auction. The FCC is currently proposing to use package bidding in its upcoming auction for spectrum in the upper 700 MHz band. But implementing even this relatively simple package bidding system has proven to be exceptionally difficult in practice, and the upper 700 MHz auction has already been postponed five times while the FCC attempts to work through these (and other) difficulties.⁵²

44) In sum, none of the auction variations described in the RFC would produce an economically efficient allocation of slot (or other) resources. Moreover, the

⁵⁰ Castles, Coopers & Lybrand, *op cit*, at 10. The need for "package" bidding in auctions with synergistic resources arises from what auction practitioners refer to as the "exposure" problem. The exposure problem arises when bidders trying to assemble portfolios of complementary resources bid above their standalone value for individual objects, with the expectation of winning all desired resources, thus capturing economic "synergies."

⁵¹ See, for example, "Ascending Auctions with Package Bidding," by Larry Ausubel and Paul Milgrom, Presentation at the Second Combinatorial Auction Conference, Wye River, October 26, 2001, or "Report 2: Simultaneous Ascending Auctions with Package Bidding," Charles River Associates Report 1351-00, March 1998.

⁵² Developing an efficiency enhancing slot auction that allowed for package bids would be considerably more complex than for the FCC's upper 700 MHz auction. The current proposal for the upper 700 MHz auction involves a total of only 12 individual licenses, which in turn generate 4,095 possible license packages. But a slot auction involving even a single airport (i.e. ignoring for the time being the interdependencies between airports) would involve significantly more slots, and thus, substantially more potential packages. For example, auctioning only one arrival and one departure slot at LGA for each of the 16 hours between 6am and 9pm (i.e., 32 slots in total) creates over *600 million* potential packages even after restricting packages to have an equal number of arrival and departure slots. The RFC's auction option, however, would require auctioning substantially more (i.e. 246) slots. RFC at 31747-31748. Given the complexity of an efficiency-enhancing slot auction and the fact that neither airlines nor the FAA has ever participated in an auction of this type, it is reasonable to believe that the burden of such an auction on both airlines and the FAA would be considerable.

development and implementation of an economically sound auction methodology would entail considerable complexities that have been overlooked by the RFC.⁵³ And even if an economically sound auction were developed, it would be unlikely to result in a more efficient allocation of slots or to have any measurable impact on the delay problem at LGA when compared to the existing buy/sell system.⁵⁴

Administrative Options

45) Because they substitute non-market criteria for market prices, administrative allocation methods can generally be expected to produce less efficient outcomes than would market based allocation systems. One of the administrative options identified in the RFC is a lottery. Lotteries are sometimes adopted because they are viewed as “fair” or “non-discriminatory” administrative means for choosing among many qualified applicants for a limited number of rights. Because lotteries allocate scarce resources by chance, low valued users/uses are as likely to obtain slots as has high valued users/uses. As a result, they are ineffective at ensuring the efficient allocation of resources.⁵⁵ Despite this deficiency, several of the RFC options would rely on lotteries to allocate a significant fraction of slots at LGA.⁵⁶ In light of the FAA’s

⁵³ Although some of these complexities might be avoided by permitting slot holders to reallocate slots in a secondary market, the RFC does not provide for such a market. And if the outcome of a simpler auction can only be made efficient by relying on a secondary market, there is no economic reason for wasting resources on an auction rather than relying on the existing secondary market to allocate slots efficiently.

⁵⁴ Because the auction options outlined in the RFC would require the taking of slots from existing slot holders, their adoption could cause considerable uncertainty in the financial markets where slots have been long viewed as airline assets and relied upon by lenders and investors as collateral.

⁵⁵ Studies elsewhere have reached similar conclusions regarding lotteries. “Lotteries on their own are most unlikely to achieve an efficient allocation of capacity, and in practice, it will be necessary to allow some kind of ex post transfer of slots...”, Castles, Coopers & Lybrand, op cit.

⁵⁶ RFC at 31736, 31739.

stated concerns about ensuring the efficient allocation of resources, the use of lotteries to allocate slots at LGA is difficult to justify.

- 46) Likewise, an allocation methodology designed to transfer slots to certain favored users or uses can lead to inefficient outcomes. “Theoretical analysis suggest circumstances in which promoting entry artificially could reduce welfare. For example, welfare could fall if a slot reallocation resulted in an incumbent abandoning the only service to a destination and a new entrant adding marginal service to a different destination that was already served by many competitors.”⁵⁷
- 47) Another of the proposed administrative options would force airlines to use larger aircraft at LGA.⁵⁸ Since most aircraft serving LGA are also used to serve other routes, however, mandating the use of larger aircraft at LGA would almost certainly reduce overall economic efficiency by preventing airlines from scheduling their aircraft in a manner that provides the best overall fit between all of those aircraft and the expected demand *throughout their route systems*. In short, the proposal is devoid of economic logic because overall efficiency is enhanced by using of smaller aircraft at LGA when larger aircraft have better economic uses elsewhere in an airline’s route system.
- 48) Likewise, variations in demand at some times of day or year make it more efficient to use a smaller aircraft (e.g., a Boeing 737) at a higher load factor than a larger aircraft (e.g., a Boeing 757) at a lower load factor. Shuttle fleets, for example, typically use smaller capacity aircraft (e.g., 737s, A320s) even though at some hours of the day they would be able to fill a larger aircraft.

⁵⁷ FTC, 1994, at fn. 26.

⁵⁸ See Docket FAA-2001-9854-1 at 31738-31739.

49) In short, the efficient aircraft size results from a market-driven process that takes into consideration the use of all assets, not just those of a single airport. As a result, efficiency would not be enhanced by regulatory requirements regarding aircraft size imposed by (or for) LGA.⁵⁹

H. Alternatives for Alleviating Delay and Allocating Slots Efficiently at LGA

50) Although the RFC is based, at least in part, on the premise that a market-based method for allocating access to runways at LGA would enhance efficiency and reduce delays, it inexplicably ignores the fact that access to LGA is already subject to a market-based allocation system—i.e., the secondary market where slots can be transferred by sale or lease. But the existing market has not escaped the notice of other analysts, including the FTC's Bureau of Economics, which noted that "[B]y establishing a market for rights to land or take off at capacity-constrained airports, the HDR helps to ensure that a scarce resource, airport capacity, is allocated to its most highly valued use."⁶⁰

51) Moreover, in light of the substantial conceptual and practical problems inherent in the RFC's options, it is highly unlikely that any of the options identified in the RFC would reduce delays or otherwise enhance efficiency, even if they could somehow be implemented.

52) It would therefore seem more sensible to focus on measures that could make the existing market-based system work more effectively, as well as on measures that

⁵⁹ The existing perimeter rule at LGA may also discourage the use of larger aircraft that would otherwise be used to serve LGA from airports beyond the existing perimeter.

⁶⁰ FTC, 1994, at 2.

permit FAA/airlines/airports to respond more effectively to the principal causes of delay at LGA – unpredictable weather and ATC problems. For reasons explained previously, effective measures designed to respond to periodic but unpredictable delays caused by weather or other factors are more amenable to technological or managerial solutions that are largely beyond the scope of this proceeding.⁶¹

53) Although the performance of the existing secondary market for HDR slots has been subject to considerable comment, it has been subject to little recent analysis. Under these circumstances, a detailed empirical analysis of the functioning of the slots market would appear to be merited in order to determine what changes, if any, might be needed to ensure that runway access at LGA is allocated as efficiently as possible. Using the empirical data provided by such an analysis as well as studies of markets for other goods and services, measures might be identified that could make the existing secondary market more effective.

I. Summary and Conclusions

54) All of the RFC's options are plagued by serious conceptual and/or practical problems that would prevent them from alleviating volume-related delays and that would reduce rather than improve the allocation of resources. Likewise, none of the options would facilitate the addition of badly needed runway capacity at LGA or elsewhere in the NYC metropolitan area. One thing the proposed options would accomplish,

⁶¹ Over the past several years, the FAA has undertaken significant efforts to improve communication and coordination with airlines in order to respond to congestion and excessive delays. It is my understanding that both the FAA and airlines believe that these efforts have succeeded in responding more effectively to the threat of delay. In addition, the FAA recently unveiled a new computer software system (User Request Evaluation Tool) designed "to reduce congestion and allow planes to more quickly reach their destinations"

however, is the transfer of substantial revenues from current slot holders at LGA to the airport proprietor and/or to new slot holders.⁶²

55) Although the virtues of market-based allocation systems are considerable, none of the options identified in the RFC can be accurately described as “market based.” In contrast, most runway access rights at LGA (and other HDR airports) are already subject to a functioning market-based allocation system—one that does not suffer from the conceptual and practical problems which plague the RFC options. As the FTC has observed: “By creating a market for slots, the HDR helps to ensure that slots are allocated to the flights that are valued most highly by consumers.”⁶³

56) Taken together, these factors suggest that:

- a) the existing slot market is fully capable of allocating access to LGA to ensure an efficient allocation of scarce runway (and other) resources; and
- b) rather than throwing out the existing market-based system, the FAA (and DOT) should consider if it is possible make the existing market system even more effective.

57) Until analyses have been done to determine if changes might improve the performance of the existing market system, the FAA could enhance efficiency at LGA by permitting slots created as a result of AIR-21, as well as other slots created by exemption, to be more freely traded in the existing slots market.⁶⁴

by letting pilots fly more direct routes or at higher altitudes, thereby reducing congestion or shortening flights. “FAA Works to Reduce Airline Delays,” Associated Press, May 7, 2002.

⁶² As previously noted, such transfers could raise “takings” issues under the Fifth Amendment to the U.S. Constitution. See ATA Comments at 18.

⁶³ FTC, 1994, at 51.

⁶⁴ This point has also been made by the FTC: “Given the important economic function of the HDR as a mechanism for efficiently allocating limited capacity, the FAA may wish to consider rescinding...the two year restriction on the sale of slots obtained through a lottery.” *Ibid.*, at 51.



AIR TRANSPORT ASSOCIATION

**Guiding Principles for Termination of the
High Density Rule at LaGuardia Airport**

1. Increasing capacity and efficiency at LGA (and the other Port Authority airports) should be the first priority. A specific plan with deliverables and milestones should be developed jointly by the FAA, the Port Authority and airlines as soon as possible.
2. The airport should operate to its maximum safe capacity at all times without artificial constraints.
3. Access to LGA should be on a first come/first served basis.
4. The FAA should give maximum effect to market forces by allowing airlines to determine their optimum schedules, routes and equipment based on their respective business models, perceptions of consumer demand and capacity for delay. FAA and the Port Authority should avoid interfering with the air transport market at LGA.
5. Only if market forces fail to bring capacity and demand into equilibrium should the FAA ration access by artificial, government-imposed means.
6. The impact of airspace constraints must be taken into account when considering measures to respond to LGA delays.
7. During congested periods, the public interest is best served by giving Part 121 commercial operations preference over other operations.
8. If access is rationed, the scheme should be simple and revenue neutral and maintain current proportional contribution levels.
9. Any scheme that rations access to LGA should not limit growth or add new fees or charges for passengers and/or airlines, whether imposed directly or through other mechanisms such as auctions.

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