

**STATEMENT OF  
ALFRED E. KAHN**

**On Behalf Of  
Auckland International Airport Ltd  
August 10, 2001**

## AUCKLAND INTERNATIONAL AIRPORT LTD STATEMENT

### 1. INTRODUCTION AND SUMMARY

My name is Alfred E. Kahn. I am the Robert Julius Thorne Professor of Political Economy, Emeritus, Cornell University, and Special Consultant to the National Economic Research Associates (NERA). My business address is 308 North Cayuga Street, Ithaca, New York, 14850.

Auckland International Airport Ltd (AIAL) has asked me to offer my opinion on two issues raised by the New Zealand Commerce Commission's draft report, *Price Control Study of Airfield Activities at Auckland, Wellington, and Christchurch International Airports*:

1. should land held for future airport development be excluded from the asset base when determining whether current and prospective returns are excessive?; and
2. are the pricing principles that only "used and useful" assets should be included in the asset base and that "today's users should only bear today's costs" economically sound (either generally or as applied specifically to the pricing of AIAL's airport services)?

As I understand the Commission's report, its affirmative answer to the first question is based on its acceptance and interpretation of the principles set out in the second question.

My own answers to both the above questions—based on the Commission's own stated first pricing principle (which I enthusiastically support) that "prices should be as close as possible to their allocatively efficient level over the medium-term"<sup>1</sup> and in the context of the Auckland Airport's present situation—are emphatically in the negative.

I must add that I do not absolutely reject the proffered pricing principles outlined in the second question, above. What I reject, strictly speaking, is the Commission's interpretation of these principles on the basis of which it proposes to exclude costs for which today's use of the airport is unequivocally responsible.

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<sup>1</sup> Commerce Commission Draft Report (July 2001), paragraph 31.

## **1.1. Background**

### **1.1.1. AIAL's Situation**

AIAL owns a substantial piece of land upon which it plans to develop a second runway for use by 2007, and for which the development and planning process has already begun. AIAL advises me its substantial customers strongly support this plan.

AIAL has set its prices on the basis of recovering the holding and development costs of that land, less any revenue earned from it, from airport users as these costs are incurred. The timing of this recovery is instrumental to the Commission's "finding" that the airport has abused its monopoly power and that its charges should be controlled.

AIAL's position is that in these circumstances its recovery of these costs does not constitute the earning of monopoly profits or an abuse of any monopoly power it may possess, but is perfectly consistent with economic efficiency and prices that would prevail in a competitive market.

### **1.1.2. The Commerce Commission's Approach**

The Commerce Commission's study is intended to determine whether: (i) competition in the airport market is sufficiently "limited"—i.e., ineffective—to give airport companies the opportunity "to exercise market power in the supply of airfield activities" (par. 28); (ii) airports have in fact exercised such power, with the result of their earning or being likely to earn excessive returns; (iii) the imposition of controls on their charges would be in the interest of their customers ("acquirers of airport services"); and (iv) controls should be imposed. To assess whether control is necessary or desirable, the Commission has examined the prices and earnings of AIAL, both current and projected, relative to what it considers to be the pertinent pricing principles.

Its first concluding recommendation, to the effect that AIAL faces competition sufficiently limited to justify further inquiry into whether it is earning excess profits, is entirely consistent with my own testimony on behalf of the user airlines in the Wellington Airport case.

The Commission's findings that AIAL is earning excessive profits and that the net economic benefits of introducing price controls are likely to be positive are dependent to a significant extent on its view that land held for future airport development should be excluded from AIAL's asset base.

### 1.1.3. My View

I submit that whether or not one accepts the rule that today's users should bear only today's costs and that only used and useful assets should be included in the asset base, the cost of the land AIAL is holding for a future runway is unquestionably part of "today's costs" in economic terms (or is at least a surrogate for today's economic costs), and that exclusion of those costs from AIAL's asset base and prices flatly contradicts both economic efficiency and the welfare of its *present* users.

## 2. PRINCIPLES OF EFFICIENT PRICING

Slightly more than thirty years ago, in my *The Economics of Regulation*,<sup>2</sup> I attempted to propound the principles of economically efficient pricing that could and should be applied to the pricing of regulated services. That discussion begins<sup>3</sup>:

The central policy prescription of microeconomics is the equation of price and marginal cost. If economic theory is to have any relevance to public utility pricing, that is the point at which the inquiry must begin.

As almost any student of elementary economics will recall, marginal cost is the cost of producing one more unit; it can equally be envisaged as the cost that would be saved by producing one less unit.

As I pointed out in the ensuing sixty pages of discussion of "Marginal Cost Pricing" and "The Application of Long- and Short-Run Marginal Costs" (Chapters 3 and 4), while in a very real sense prices at strictly short-run marginal cost would be optimal, numerous considerations, both theoretical and practical, might call instead for the application of long-

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<sup>2</sup> John Wiley & Sons, Vol. 1, 1970, Vol. 2, 1971, reprinted by MIT Press, 1988.

<sup>3</sup> *Op. cit.*, p. 65.

run incremental cost (LRIC)<sup>4</sup>, which includes costs associated with the construction of additional capacity when and as those costs are reasonably predictable<sup>5</sup>:

As we have already seen, there is a strong economic case for letting price rise and fall as demand shifts along the rising SRMC curve. If SRMC is at times zero and at other times discontinuous (because an absolute physical limit of capacity has been reached), the price should fluctuate—down to zero, if necessary, because in the presence of excess capacity, no matter how temporary, no business should be turned away that covers the SRMC of supplying it; and up in periods of shortage to whatever level is necessary to ration limited supplies among customers. Once the new bridge is built, it is wasteful to keep people from crossing it; the time to charge for crossings is when congestion sets in.

But, we have also pointed out, this is a counsel of perfection. It may well require modification in a world where (1) buyers and sellers make mistakes, (2) perpetual price fluctuation can be expensive for sellers to administer and buyers to keep track of and respond to intelligently, (3) capital and labor are incompletely mobile, (4) many other prices are highly inflexible, and (5) there is a business cycle.

Short-run marginal costs include the costs of congestion imposed by additional usage (or saved by a diminution of usage). In situations where capacity is constrained, marginal cost pricing would therefore mean setting prices at short-run marginal *opportunity* cost—the value of the service to the highest unsuccessful bid, if that use were held within efficient limits and subject to auction. This would be the “whatever level is necessary to ration limited supplies among customers” to which I refer above.

When pricing at short-run marginal congestion costs is infeasible, or is by common consent rejected, the principle of charging on the basis of marginal responsibility requires incorporating in price the *long-run* incremental cost of expanding capacity sufficiently to hold congestion within economically efficient limits. The short-run marginal and long-run incremental costs are effectively substitutes for one another. Increasing use entails either marginally increasing congestion costs or incurring the additional costs of increasing capacity sufficiently to hold congestion within economically efficient limits. An efficient price must reflect one or the other, so that society’s incurrence of either the short-run or the

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<sup>4</sup> See the sections “Specifying the Time Perspective,” pp. 70-75, and “Specifying the Incremental Block of Output,” pp. 75-77.

<sup>5</sup> p. 104.

long-run incremental cost is subjected to a proper market test and consumption is constrained to efficient levels.

In theoretical equilibrium, the two will be equal. If (short-run) marginal congestion costs were lower than the (long-run) cost of incrementally reducing congestion, it would be inefficient to construct new capacity and more efficient to use the existing facilities more intensively. If or when the short-run marginal congestion costs exceed the cost of relieving congestion by building additional capacity, the economically efficient expansion path would be the construction of additional facilities, and economic efficiency would require users to face a price reflecting the lower long-run incremental cost (including the marginal cost of that *future* addition to capacity).

My academic writings, occasional public statements and testimony consistently expound the proposition that ideally efficient rates would (and regulated rates should) track short-run marginal costs (including congestion costs); and that where short-run marginal cost pricing is impractical, efficient prices would be based on their surrogate, long-run incremental costs. The latter include costs associated with the construction of additional capacity when and as those costs become reasonably predictable.

Correspondingly, I have consistently rejected the proposition that costs associated with increases in capacity, either (i) actively in construction or (ii) by general agreement necessitated by existing or clearly contemplated levels of demand, do not belong in regulated rates. I have therefore explicitly rejected the opposing propositions, such as that "today's users should bear only today's costs" or that plant not yet in service is not "used [or] useful" when these propositions are interpreted to exclude the causal responsibility of today's demand for the need to build additional capacity.

During my Chairmanship of the New York Public Service Commission, we began with the general rule of basing charges on marginal cost responsibility. Recognizing that those costs vary widely by time of day and season of the year, we set out explicitly to require that those variations—equivalent to the variations in short-run marginal congestion costs—be reflected in rates to the greatest extent feasible. For example, we approved rates for electric power sold by the Long Island Company eight to ten times the rates on ordinary days when the thermometer got above 84 degrees. Significantly, however, we found ourselves forced to

base those higher rates not on short-run marginal operating costs but on long-run incremental costs—the costs of installing peaking generation units sufficient to prevent unacceptable risks of blackouts.

My testimony on behalf of the airlines protesting charges by Wellington Airport some 10-15 years ago was also consistent with this position. I rejected inclusion of the costs of building a replacement or additional airport capacity in that case on the ground that the need, by general agreement, was decades off in the future. Conversely, my recent testimony on behalf of the Sydney Airport supported the opposite position because (short-run marginal) congestion costs were already high and the need for additional airport capacity universally conceded.

My frequent public assertions,<sup>6</sup> on the essentiality of pricing airport services on the basis of marginal congestion costs all support Auckland's position as I understand it. I enunciated these principles also in my testimony on behalf of the British Airports Authority in its arbitration with the U.S. government over Heathrow landing charges. In this particular testimony I argued the principle of marginal cost pricing in both its up side and down side implications, defending much higher landing charges at Heathrow and correspondingly much lower landing charges at Stansted and Luton. In the case of Heathrow this would have reflected the high short-term marginal opportunity costs of landings and long-run costs of expanding terminal capacity.

The Commission's view of the pertinent principles in the present context is in direct contrast to those positions I have held publicly since at least 1970. In direct conflict with my prescription of the efficient time pattern of tolls for bridge crossings, above, its proposals would perversely accelerate congestion on the predecessor alternatives while the bridge was still under construction and inefficiently restrict use of its more than ample facilities once it had been built.

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<sup>6</sup> In the last few years but also going back to 1978, in a speech addressed to the Federal Aviation Administration and, before that, in Vol. 1 of my *The Economics of Regulation*.

### 3. EXCLUSION OF SECOND RUNWAY LAND

#### 3.1. “Used and Useful” and the Issue of “Pre-financing”

The Commission’s adoption of the guiding principles of economic efficiency—alternatively stated, emulating the competitive outcome—are in my judgment unexceptionable.

Significantly, however, the Commission makes no allusion to this unexceptionable economic principle when it turns to the question of whether present ratepayers should pay for the opportunity costs of land held for future use. Furthermore, it attempts in no way, so far as I can see, to relate its proposed disallowance of such investment costs to those principles of economically efficient pricing, justifying its decision instead in terms of a traditional regulatory rule of thumb—the so-called “used and useful” doctrine.<sup>7</sup> It does so despite its recognition that “It may not be desirable for airport companies to delay investment until demand exceeds capacity,”<sup>8</sup> and that “Expansions in airport capacity can be ‘lumpy.’”<sup>9</sup> Instead the Commission merely states a “preliminary view...that pre-financing of new investment is generally inappropriate—only ‘used and useful’ assets should be included in the asset base.”<sup>10</sup>

Its justification of that position—that it “should encourage airports only to undertake new investments that will be ‘used and useful’”—is in itself unexceptionable. Its application in the present situation to justify exclusion of the *present*—not future—costs of investment in assets that *will* by general agreement indeed be “used and useful,” however, is not only incongruous; it has no justification in terms of either fairness or what the Commission itself has identified as the overriding criterion, namely, the dictates of economic efficiency.

So far as I am aware, no one quarrels with the regulatory proposition that ratepayers should pay only the costs of capacity “used and useful” in serving them; or with its corollary, that customers have an obligation to return to suppliers the costs of serving them and suppliers

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<sup>7</sup> Commerce Commission Draft Report (July 2001) paragraphs 45-53.

<sup>8</sup> Commerce Commission Draft Report (July 2001) paragraph 50.

<sup>9</sup> Commerce Commission Draft Report (July 2001) paragraph 51.

<sup>10</sup> Commerce Commission Draft Report (July 2001) paragraph 53. “Inappropriate” is a usefully vague characteristic: the criteria I apply, instead, are the criteria of economic efficiency and fairness—the latter defined as charging customers the marginal costs for the incurrence of which they are causally responsible.

have a corresponding entitlement to a return on and of the investment that is indeed “used and useful”. The time pattern of recovery is, however, subject not merely to the corollary that current ratepayers not be saddled with the cost of capacity that does not yet serve them, but, overridingly, principles of both fairness and economic efficiency, the latter of which would maximize consumers’ welfare by imposing on them, contemporaneously, the costs for which they are *causally responsible*.

The Commission nowhere seems to pose the question of whether or the extent to which the costs of “pre-financing of new...investments that *will* be ‘used and useful’” should or should not be part of the marginal costs on the basis of which efficient prices are to be set. Its justification of excluding such “pre-financing” costs in terms of encouraging airports to undertake only such investments as will be “used and useful” is of course unexceptionable, but what if the method it has chosen to provide such incentives arbitrarily excludes such pre-financing costs as are associated with such new investments as *will* in fact be “used and useful” and that economic efficiency requires be incorporated in price?

The only theoretically sound resolution of this apparent dilemma is that in determining whether AIAL’s prices are such that regulation is necessary, the Commission cannot escape responsibility for making some judgment about whether those pre-financing costs are “prudent”: in a world of uncertainty, this means that it must, whether positively or merely by refraining from disallowance, make a judgment about the prudence of such costs; but that such costs may in principle be part of the marginal costs on the basis of which efficient prices should be set is unquestionable.

As the foregoing statement emphasises—and as I have recently had occasion to reemphasise:

The concept of ‘cost’ has no meaning in either economics or logic except in terms of *causation*. When we say that drunk driving ‘costs’ us so many lives per year or so many dollars in property damage, we can mean only that the practice *causes* us, individually and/or collectively, to suffer those consequences. Similarly, when we say that the ‘cost’ of a subscriber loop is some amount, it can mean nothing except that some act of purchase by a consumer *causes* a telephone

company and society to incur that cost. In order to set efficient prices we must then determine *which* act of purchase has that effect.<sup>11</sup>

Let there be no mistake of the application of this truism to the Auckland situation. Current users of Auckland Airport *are* causally responsible for the congestion that they impose on one another. These congestion costs are unequivocally part of the short-run marginal costs that economic efficiency requires be reflected in price—or their *surrogate*, the long-run incremental costs of relieving that congestion or holding it within efficient limits. There is no denying that these are costs of serving customers, costs that would be avoided if they made lesser demands on the existing capacity, and costs that economic efficiency requires be subjected to the market test of whether consumers are willing to pay them. The fact that the latter are costs of capacity that does not yet serve those customers in no way vitiates their marginal causal responsibility for their incurrence. Whether they are best imposed on current users in the form of SRMC-based charges or of the costs of mitigating that congestion becomes subject to the kinds of practical and administrative considerations I outline in my *The Economics of Regulation* and illustrate in Section 2 above. In AIAL's situation, as I understand it, there is general agreement on the prudence of expanding capacity within the timeframe proposed by the airport. This involves AIAL carrying the costs (or opportunity costs) of land being held for the agreed-upon needed additional runway. As I am informed, the airport and its airline customers agree that building a second runway is preferable to congestion pricing as the way of reducing excessive congestion.

As a general proposition, efficient prices *today* would include those congestion costs; so in the present situation they should include their concededly superior surrogate—the present value of the costs associated with the second runway expansion.

The asserted impropriety of charging present customers costs associated with plant that does not yet serve them was one I frequently encountered during my chairmanship of the New York State Public Service Commission, when we were presented with requests by electric companies in particular to incorporate some portion of the costs of their construction work in progress in their rate bases, for purposes of setting immediately prospective rates.

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<sup>11</sup> *Letting Go: Deregulating the Process of Deregulation*. Michigan State University Institute of Public Utilities, 1998, p. 71.

We were conscious of the burden on present ratepayers of imposing on them a portion of the costs associated with the construction of additional capacity that was not yet serving them. At the same time, as we explained in numerous of our decisions that I actually wrote,<sup>12</sup> current ratepayers would receive a return on their effectively supplying some of the necessary capital during the construction process, not merely because of an equivalent reduction in the companies' rate bases, when the plants came into service, but also in a reduction in their overall cost of raising capital, because that practice would increase their current cash flow and interest coverage; and also because their previous rates were evidently below long-run incremental costs.

There is one consoling consideration, however, for the economist who finds himself forced to raise rates in these ways: The cash-flow problems that require such solutions seem to arise because the long-run incremental costs of supply exceed average revenue requirements, as traditionally determined. These expedients therefore have the tendency to bring rates closer to incremental costs, and this has the powerful advantage, in terms of economic efficiency, of giving consumers the proper signals about the marginal opportunity costs they impose on the economy.<sup>13</sup>

Several years later, I testified<sup>14</sup> in 1985 on behalf of a similar request by the Illinois Power Company, on the grounds, explicitly, that:

I would make my decision [on the desirability of including construction work in progress in rate base and to what extent to which it ought to be done], first, on whether doing so would move the time profile of rates closer to the profile of marginal costs; and second...on the basis of a comparison of costs and benefits to ratepayers as a whole...with of course a discounting of future benefits”.

In this testimony I explicitly rebutted “regulatory shibboleths” cited in opposition by some regulatory economists in that proceeding, asserting the impropriety of charging current ratepayers the costs associated with capacity that did not yet serve them—pointing out, explicitly, that, as I have just observed, the proposal of the Illinois Power Company “would move the time profile of rates closer to the profile of marginal costs....”

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<sup>12</sup> See also my “Can an Economist Find Happiness Setting Public Utility Rates?,” *Public Utilities Fortnightly*, January 5, 1978, pp. 6-7, for a fairly thorough summary.

<sup>13</sup> *Ibid.*, p. 7.

<sup>14</sup> Illinois Commerce Commission Docket No. 84-0480, Additional Prepared Testimony of Dr Alfred E. Kahn, IP Exhibit 8.3, pp. 33

### **3.2. The Proper Test for Excess Pricing**

Commonly, the stated objective of regulatory control is to achieve an outcome as close as possible to that of an effectively competitive market; and that is the principle that the Commission has explicitly and correctly adopted in deciding whether regulatory control of AIAL is necessary or desirable. Its test of the need for regulatory control must therefore assess AIAL's behaviour against that of a competitive business. By all accounts there is agreement between the airlines and AIAL that additional capacity is needed to meet rising demand. This seems completely consistent with what would be expected of an efficient competitive business anticipating near term growth in its market beyond its current capacity—in which case, the Commission's decision to remove this land from the asset base for the purpose of deciding whether it is or is likely to earn excessive revenues seems to me to violate the test of what a prudent competitive business would do.

### **3.3. Today's Consumers Should "Only Bear Today's Costs"**

I have already explained why the Commission's proposed application of the common regulatory doctrine to the effect that today's customers should bear only today's costs is misguided:

1. "Today's costs" unquestionably include short-run marginal congestion costs.
2. Those congestion costs are not directly reflected in AIAL's rates charged to present users of its facilities.
3. It is however incurring the costs of holding land for the future runway, the need for which is agreed upon.
4. Those costs are a surrogate and remedy for the short-run congestion costs that unquestionably should be incorporated currently in efficient prices charged to current users. The incremental capital costs required to hold (short run) congestion costs to economically optimal levels *are* today's costs.
5. The rule that present purchasers should not be saddled with tomorrow's costs would seem to dictate that present prices should not reflect the progressively higher short-run marginal congestion costs anticipated over the next five years or so, by which time the additional runway is expected to be needed. The simple answer is that so

long as all parties seem to agree on the impracticality of true congestion cost pricing, the result, just as in the case of the hypothetical bridge, would be a time pattern of rates precisely the opposite of what economic efficiency requires—far below efficient levels as congestion increases in the next several years, then far above those levels just as the new runway becomes available and short-run marginal congestion costs fall to zero.

According to the Commission's pricing principles, "Prices should send appropriate signals for determining whether new investment... would be efficient."<sup>15</sup> This is precisely the reason why inclusion of either short-term marginal congestion costs or their surrogate, the capital costs of the additional investment required to hold those costs within efficient limits, should be reflected in price currently. This principle clearly justifies AIAL's assertion that "land held for future use that is associated with current operations can be included in the asset base where there is an intention (and reasonable certainty) to use the land at a future date for operational purposes,"<sup>16</sup> and there is agreement from substantial customers on the prudence of that intention.

#### **4. CONCLUSION**

1. Substantial customers evidently agree that AIAL has acted prudently and in compliance with the requirements of economic efficiency by holding land for development of a runway planned for 2007.
2. The Commission's removal of that land from AIAL's asset base in determining that it is earning excessive returns implicitly adopts as its standard myopic behavior—the failure to act prudently in preparing to be in a position to satisfy the needs generally projected for the near term future.
3. AIAL should be permitted to recover the net cost incurred in holding and developing this land during the development phase as that would involve a time profile of charges more closely approximating marginal costs and therefore economic efficiency than would the Commission's proposed treatment of those costs; and it would do so without increasing the total burden on its customers.

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<sup>15</sup> Commerce Commission Draft Report (July 2001) paragraph 6.24.

4. The asserted principle that "today's users should only bear today's costs" is meaningless in an industry with lumpy, long lived assets and fails to recognise the causal effect of today's demand on the investment requirements of tomorrow, and accords neither with fairness nor economic efficiency. It is a regulatory shibboleth, not an economic principle. In situations in which it conflicts with efficient pricing—specifically with an efficient behaviour of prices over time—the principle explicitly adopted by the Commission itself dictates that it be ignored.
5. Even in terms of equity, what sounds like the application of a reasonable principle is in fact irrational. The unexceptionable principle is that it is wrong (in terms of both fairness and economic efficiency) to charge present consumers for costs for which they are not causally responsible. This is not the case, however, of the costs of the land AIAL is holding for its planned second runway.

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<sup>16</sup> Commerce Commission Draft Report (July 2001) paragraph 7.56.