

TRANSPower NEW ZEALAND LIMITED

Submission on the Commerce Commission Price Control Study of Airfield Activities

August 2001

T R A N S P O W E R



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T R A N S P O W E R



Introduction and Summary

1.1 Transpower

This submission is made by Transpower New Zealand Limited (“Transpower”), PO Box 1021, Wellington New Zealand.

Transpower is a State Owned Enterprise. It is the owner of New Zealand’s high voltage transmission grid (the “national grid”) which transmits electricity from generators to distributors and major electricity users connected to the national grid, and is also the System Operator. The System Operator is responsible for the co-ordination of the transmission of electricity across the national grid. Transpower’s two primary drivers are security of supply and efficiency for itself and the electricity industry.

1.2 Summary of Submission

This submission sets out Transpower’s views on the approach to price control described in the draft report. Our comments on the Commerce Commission’s draft report “Price Control Study of Airfield Activities at Auckland, Wellington, and Christchurch International Airports”(“Draft Report”) are summarised as follows:

- ? Transpower believes that the pricing principles are basically sound, but that the principle “Today’s consumers should bear today’s costs” requires clarification in order to be consistent with the other pricing principles. Where “today’s costs” can include new investment when this becomes reasonably predictable, it is workable. However, if the concept refers to pure marginal costs, it is unsustainable.
- ? The Draft Report does not discuss the principles that should be applied in establishing an appropriate valuation methodology, nor does it provide criteria, against which, different valuation methodologies can be tested. Transpower suggests a number of principles that should be considered explicitly in the selection of a valuation methodology.
- ? Transpower asks that the Commission clarify the meaning of the term “used and useful” so that its implications asset valuation (and particularly, incentives for new investment) can be assessed.
- ? The comparison of valuation methods in the Draft Report is inconsistent in its application of valuation principles. This comparison would have benefited greatly from the application of an explicit set of valuation principles.
- ? The Draft Report’s findings on cost of equity and cost of debt suggest a lack of willingness on the part of the Commission to

consider how the circumstances of individual firms affects the cost of capital. This is reflected in the choice of a post tax cost of capital model which assumes away some of the richness needed to accurately describe an investors true post tax return, and a failure to allow for differences in leverage and credit rating in setting the debt premium.

- ? The Beta for Transpower is incorrectly quoted in the Draft Report as 0.30. The Beta estimate used by Transpower in its self regulating revenue requirement framework is 0.25.
- ? Transpower believes it is inappropriate to use electricity industry beta's for estimation of an airfield's cost of capital. While there may be similarities between the industries to the extent that they are regulated, there are also significant disparities.

2. Pricing Issues

2.1 Pricing Principles

The pricing principles which the Commission espouses in Section 6 of the Draft Report are generally sound. Transpower's only concern is the catch phrase "Today's consumers should only bear today's costs". This is introduced as the tail end to a pricing principle:

Prices should be as close as possible to their allocatively efficient level over the medium-term. Prices should be commensurate with the desired level of service quality and based on appropriate costs (productively, and dynamically, efficient costs). Prices should encourage efficient use of a supplier's facilities and avoid cross subsidisation. *Today's consumers should only bear today's costs.* [italics ours]

Transpower seeks clarification on this terminology to ensure it is, in fact, consistent with the remainder of the pricing principles.

Specifically, it is important that "today's costs" include the cost of additional capacity where this is imminent (and predictable). The price of new investment must be included in pricing as a signal to users of the assets to ensure that appropriate cost/benefit analysis can take place prior to the investment.

If the term refers to pure marginal costs, this is unsustainable in industries with large fixed costs and sunk assets.

2.2 Airfield Charges

The section on airfield charges is also basically sound. However Transpower would like to make a number of minor points.

- ? Dynamic efficiency should be added to the list of issues that need to be examined in the pricing inquiry as described in paragraph 9.1.
- ? The Commission, in paragraph 9.22 implies that stand-alone costs are related to the valuation method, e.g. historical costs. However costs should relate to the sunk costs incurred by an efficient competitor. Those costs are

more appropriately estimated using optimised replacement cost. This is an important concept in pricing as it implies that even if assets are valued on historical costs, price caps should be based on optimised replacement cost.

- ? The lack of dynamic efficiency as an objective has led to a suggestion in paragraph 9.39 that charging regimes should encourage airlines to adopt lighter aircraft to reduce landing charges. This is not likely to be an efficient outcome as the majority of costs are sunk or fixed.
- ? The Commission incorrectly concludes in paragraph 9.45 that incremental costs will be close to stand alone costs. Stand-alone costs are very high (i.e. high fixed and sunk costs) but incremental costs are close to zero.

3. Asset Valuation Methodology

3.1 Valuation Purpose and Principles

In formulating an approach to asset valuation the commission has begun the process of selecting a valuation regime without clearly outlining the purpose and principles which should govern that selection.

The purpose of valuation is discussed only briefly in the introduction. This is in the context of determining the return of, and returns on, capital. There are a number of other uses to which valuations are put, particularly in disciplining new investment spend, providing benchmarks for assessing new investment opportunities, supporting acquisition and disposal processes, and providing a basis for price setting.

In the Draft Report valuation principles are only referred to generically, in the context of advantages and disadvantages of specific methodologies. Other principles are revealed through the selection procedure. Some are migrated from the pricing principles, while others are not clearly defined.

Among the principles not clearly defined is the concept of “used and useful” assets. The principle of “used and useful” is not defined in the Draft Report. It has several possible meanings. For example “used and useful” could mean that assets must not be included in the asset base until after they have been commissioned. This would have implications for the calculation of both historical and replacement costs, and has consequences for the capitalisation of interest during the construction period.

Suggested Valuation Principles

Transpower wishes to suggest some fundamental principles that should be adopted in consideration of valuation methodologies. These should form the basis for criteria against which alternative valuation methodologies can be tested.

? **Efficiency:**

Valuation methods should be compared with respect to the incentives they create for investors, customers and regulators, and the impact of those incentives on allocative, productive, and dynamic efficiency.

? **Separability:**

Valuation, or determination of the return of and return on

capital, should be considered as a separate activity to pricing.

- ? Allocation of Risks and Decision Rights:
The extent to which a valuation methodology creates risks for investors and customers should be considered in selecting a methodology.
- ? Flexibility and Consistency:
The valuation method chosen should provide the most efficient outcome over the widest range of relevant assets or investments, and valuers should be able to apply the methodology appropriately without constant reference to a regulator.
- ? Feasibility:
The method chosen should be able to be applied. For example, methods based on historical cost might not be feasible if the cost data has been lost due to passage of time (as is the case with many electricity transmission assets).
- ? Stability:
The introduction of one off methodologies, particularly where these are prone to change on a regular basis.
- ? Regulatory Burden:
The costs of conducting the valuations should be considered.

Adoption of an explicit set of valuation principles would assist the Commission in selecting and communicating an approach to valuation.

3.2 Selection of a Valuation Methodology

The selection of a valuation methodology should be based upon the ability of the rival methodologies to perform these functions in an economically efficient way. That is, the selected methodology should promote efficient investment and efficient pricing while allowing investors to earn an appropriate rate of return on efficient investments. Efficiency in this context refers to allocative, productive, and dynamic efficiency.

There are two generic methodologies for establishing the value of specialised assets. These are the historical cost method and the replacement cost method. The replacement cost method should be considered to be a nominal equivalent of the historical cost method, as it represents the cost of reproducing the services provided by the modern equivalent of the assets in the present day.

The Commission's reasons for selecting the historical cost approach over the replacement cost approach contain inconsistencies in treatment and demonstrate a misunderstanding of the operation of the two methodologies.

For example, in comparing the generic historical cost method with a specific replacement cost methodology the Commission has been inconsistent. Among the objections to ODRC are:

- ? Discretion in application of optimisation (Table 23: A1). This is inconsistent, as the Commission seems to accept the application of "Optimisation" to the historical cost base.
- ? The use of Modern Equivalent Asset values (Table 23: A2). The Commission argues that replacement costs for modern equivalents should be based on technology available at the time the investment is made. Modern equivalent assets represent the costs which an efficient competitor would face in establishing an identical service. Such a competitor would not be limited to "old" technology.
- ? Absence of limits on values to "bypass prices", or in other words – absence of an economic value test (Table 23: A3 and A4). While missing from the ODRC approach, this test is included in the ODV replacement cost methodology, which the Commission has not considered.

The ODRC methodology (and by implication all other replacement cost methodologies) is finally dismissed in paragraph 7.43 through an appeal to the principle that today's consumers should pay today's costs. As pointed out in Section 2.1, application of a pure marginal cost approach in an industry with large sunk and fixed costs would be detrimental to both allocative and dynamic efficiency.

The principle differences between the historical cost approach and the replacement cost approach are that:

- ? Approaches based on historical cost reduce dynamic efficiency by allowing investors to get a return on "gold-plated" or inefficient investments, while the replacement cost approach ensures that only technically efficient solutions can be valued.

- ? The replacement cost approach does not allow full recovery of economic costs on efficient investments if there is a high level of technological change, or if the risk of future optimisation is non-zero¹.

¹ This is due to the problem of asymmetric risk, where asset values can fall below the modern equivalent replacement cost, but not rise above it.

4. Weighted Average Cost of Capital

4.1 WACC Methodology

Transpower agrees with the Commission's initial selection of the Brennan-Lally CAPM model, but notes that the Commission is being inconsistent in arguing for the adoption of a simplified version of the model.

In paragraph 8.17 the Commission favours the Brennan-Lally model because it "explicitly takes account of personal tax rates that differ across both investors and sources of income, and which is applicable to the New Zealand tax regime." Then in paragraph 8.19 some of the richness (in terms of tax treatment) inherent in this model is assumed away.

4.2 Cost of Debt

The purpose of cost of debt estimates is to act as benchmark, reflecting the financing costs for an organisation of similar credit risk with an efficient capital structure.

In adopting a single debt premium for all three airfields the Commission has implicitly assumed that each business can fund at the same rates. This seems unlikely, as each airfield has a different credit rating, and this, along with their relative size, funding requirements and degree of leverage is likely to affect their cost of funds.

The Commission needs to consider using a different debt premium for each airfield.

4.3 Market Risk Premium

Transpower agrees with the Commission's estimate of the PTMRP of 8%, and currently uses this figure in calculating its own cost of capital.

4.4 Beta

Systematic (or non-diversifiable) risk affects most investments. It includes exposure to economic expansion and recessions, or periods of unanticipated inflation. Beta is a measure of the systematic risk of an asset.

The Draft Report incorrectly states that Transpower's asset beta is 0.30. Transpower's asset beta as reported in its 1999/00 Annual Report is 0.25.

Transpower's asset beta was estimated by Credit Suisse First Boston. The estimate was based on betas for comparable electrical utilities in the United States and United Kingdom. Use of Transpower as a comparator for New Zealand airports would be inappropriate, as it would in effect be using US and UK electricity companies as a basis for establishing a beta for New Zealand airfields.

The Commission identifies the regulatory environment as fundamental to the performance of the airport, and uses this argument as a basis for using asset beta's from regulated United States and United Kingdom electricity firms. In doing this the Commission have assumed that regulatory risks are systematic, and would be included in the asset beta.

However optimisation of assets are an asset specific form of regulatory risk, and are not systematic. "Estimates of the cost of capital are sure to provide downward biased estimates of the necessary rates of return in the presence of such regulatory risks"². The Commission has selected comparators on the basis of regulatory risks, which are not reflected in estimates of beta.

It would be more appropriate for the Commission to use a small sample average of comparators from Australasian airfields businesses than to use qualitative estimates of betas from other industries and remote jurisdictions.

² Kolbe and Tye, "The Fair Allowed Rate of Return With Regulatory Risk", Research in Law and Economics, 1992

5. Conclusion

In summary, Transpower believes that many of the pricing principles adopted by the Commission are sound. However, the Commission needs to re-consider its approach to asset valuation in the light of an expressed set of valuation principles so that its reasoning can be clearly understood by industry participants, and review the methodology used to establish estimates of beta in the cost of capital.