



# **Competition effects of declaration of Sydney JUHI facility**

**A REPORT PREPARED FOR ALLENS ARTHUR ROBINSON**

November 2011



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# Competition effects of declaration of Sydney JUHI facility

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Table 1: Example of the operation of the IPRA

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## Executive Summary

1 Frontier Economics (Frontier) has been asked by Allens Arthur Robinson to prepare an expert report in relation to an application by the Board of Airline Representatives of Australia (BARA) to the National Competition Council (NCC) for declaration of certain jet fuel services at Sydney Airport. In particular, we have been asked to:

- Assess the criteria for third parties to obtain equity participation in the Joint User Hydrant Installation (JUHI) joint venture (JUHI JV), including the principles used in the application of these criteria; and
- Provide a report assessing whether access (or increased access) to the JUHI Service would promote a material increase in competition in:
  - the market for the supply of jet fuel at Sydney Airport
  - the market for the supply of into-plane services at Sydney Airport; and/or
  - the domestic and international market/s for air passenger and freight services at Sydney Airport

in accordance with section 44G(2)(a) of the Competition and Consumer Act 2010 (Cth) (CCA) if, in the absence of declaration, access to the JUHI Service was provided in accordance with the criteria for equity participation.

### ***The Sydney JUHI services and existing access arrangements***

2 The Sydney JUHI involves a set of infrastructure owned by 5 joint venture participants which is used as a means to assist in the provision of jet fuel for both domestic and international aircraft at Sydney Airport. In this respect, there are three key stages involved in the supply of jet fuel to aircraft:

- The sourcing of fuel from various domestic and overseas sources, including the means by which this fuel is delivered to Sydney Airport;
- The receipt, storage and distribution of this fuel once it is at Sydney Airport; and
- The delivery of this fuel into aircraft.

3 The Sydney JUHI facilities are used in the second of these three stages. During this stage of the supply chain, the Sydney JUHI also performs a number of other functions, including strict quality checks at various points in the storage and distribution process; defueling in the event that aircraft require fuel to be removed; specialised hydrant and equipment repair and maintenance for all JUHI equipment located airside etc.

- 4 Access to services provided by the Sydney JUHI is presently covered by the terms and conditions set out in a confidential agreement entered into by the JV participants (the JV Agreement). This agreement sets out terms relating to:
- The entry of new participants into the joint venture arrangements
  - On-going usage charges for access to the services provided over the joint venture facilities
  - The withdrawal of participants from the joint venture arrangements.

### ***Efficient charging arrangements for a bottleneck facility***

- 5 The economic literature shows that:
- Allocative efficiency will be best achieved where the marginal price of a service is set equal to the marginal cost of providing the service.
  - With natural monopoly infrastructure, however, the marginal cost of providing a service at all levels of market demand is likely to be below the average cost of providing the service. This means that marginal cost pricing alone will be insufficient to enable a firm to recover all of its costs of producing services over the relevant infrastructure.
  - There are a number of ways that prices could be set in order to ensure investors can receive revenues sufficient to cover their total costs, although two extreme cases are often referred to in the economic literature. The first involves a two-part tariff, where consumers pay a price equal to marginal cost as well as paying a fixed fee to contribute toward the recovery of fixed costs. A second extreme option is to set prices purely on a usage basis, with prices set equal to the average cost of providing a service. An example of such pricing might involve prices set on the basis of some measure of long-run incremental cost (LRIC). Economists sometimes refer to pricing that involves a single uniform per unit charge as ‘linear’ pricing.
  - Two-part tariffs are likely to lead to more allocatively efficient levels of consumption of services provided over given infrastructure than linear average cost prices. This is because average cost prices inflate price above marginal cost, thereby reducing demand for services below allocatively efficient levels. However, pure two-part tariffs may reduce the number of users of infrastructure services (and hence the number of competitors in downstream markets) because some users may find the size of the fixed contribution in a two-part tariff is too high relative to the profits they can expect to earn from selling final goods in downstream markets.
  - This suggests some compromise between a pure two-part tariff and simple linear average cost pricing may be suitable in order to balance the allocatively efficient use of relevant infrastructure and the number of competitors in downstream markets. One way this could be achieved is by lowering the fixed

fee paid by all parties so that it does not fully recover all of the fixed costs of providing the services. In order to ensure charges recover all costs, however, this would need to be balanced by raising the marginal price for each unit of the good sold to some extent above marginal cost.

***The existing charging arrangements promote efficient investment in, and use of, the joint venture facilities***

- 6 The terms and conditions of the JV Agreement require participants to pay both fixed and variable fees to use the Sydney JUHI facilities. In particular, JV participants are required to:
- Pay an initial purchase contribution in order to become members of the joint venture
  - Pay on-going fees to cover the operating costs of the JUHI. These involve both a fixed fee in proportion to share ownership to cover some types of fixed operating costs; and a variable fee to cover variable costs (and potentially some level of fixed costs), where this fee is estimated on the basis of usage of the facilities.
  - Pay for major additions, alterations or extensions of the JUHI facilities in proportion to their share of the ownership of the facilities.
  - Participate in an inter-participant rental adjustment (IPRA) arrangement, which has the effect of converting some fixed capital costs into usage-based charges.
- 7 The overall effect of the charging arrangements under the JV Agreement is to reduce usage-based charges below those one would expect under a simple form of average-cost pricing where all costs are recovered simply through a single usage-based charge. That is, in order to recover the total costs of providing services using the JUHI facilities, participants are required to pay some level of fixed charges as well as a variable per unit charge. However, the arrangements do not involve a pure two-part tariff because some portion of fixed costs are still recovered through usage-based charges.
- 8 It follows, therefore, that the terms and conditions of participation in the Sydney JUHI involve a set of arrangements that represent a compromise between a pure two-part tariff and simple linear per usage/throughput charges. We find this is likely to:
- lead to a level of usage of the JUHI facilities that is more allocatively efficient than that which would occur if prices were set simply on a linear through-put charging basis;
  - provide better incentives with respect to the timing of capital investments as it goes some way towards mimicking the bargaining solution reached by the

initial JV participants when determining the allocation of capital expenditure costs between them; and

- provide for the potential for a greater number of users of the JUHI facilities than would arise under a pure two-part tariff by seeking to recover some types of fixed cost via variable usage/throughput charges.

***Increased access is unlikely to promote a material increase in competition in the relevant markets***

- 9 Under the JV Agreement, third parties are able to acquire the Sydney JUHI Services on the same terms and conditions as the existing JV participants provided they meet certain qualification criteria and are prepared to pay a purchase contribution to existing parties. On their face, these requirements do not, by and large, appear to treat a potential new participant differently to existing JV participants. In turn, this suggests there are no barriers to entry in the economic sense to third parties seeking to use the Sydney JUHI Services under the current arrangements.
- 10 In the alternative, declaration of the service could lead to a change in the pricing structure for the Sydney JUHI Services that would involve users paying a single through-put charge, and without the need to make fixed payments or make a purchase contribution. To the extent this single through-put charge seeks to recover the fixed costs of providing the services, this will necessarily raise the through-put charge above the existing through-put charge paid by the JV participants under existing arrangements. While this may lead to more users of the Sydney JUHI, this would not represent a material increase in competition. This is because the higher through-put charge would represent a higher marginal cost for these users when they seek to compete in the relevant markets. In turn, this will lead to a softening of competition in the relevant markets and/or place third parties at a competitive disadvantage to the existing JV participants by raising their marginal costs relative to those that would be faced under the current JV Agreement.

# 1 Introduction

11 Frontier Economics (Frontier) has been asked by Allens Arthur Robinson to assist it by preparing an expert report in relation to an application by the Board of Airline Representatives of Australia (BARA) to the National Competition Council (NCC) for declaration of certain jet fuel services at Sydney Airport.

## 1.1 Report authors

12 This report has been written jointly by Philip Williams and Richard York.

13 Philip Williams was a full-time academic economist at the University of Melbourne from 1978 until February 2002 when he resigned his full-time position as Professor of Law and Economics in the Melbourne Business School. Since February 2002 he has been the full-time Executive Chairman of Frontier Economics Pty Ltd. A copy of his CV is annexed to this report.

14 Richard York joined Frontier Economics in December 2009. Prior to that date, he worked for two years as the Regulatory Affairs Manager at Vodafone New Zealand. Before this, he worked as the Economic Associate to the Australian Competition Tribunal, and spent almost eight years working for the Australian Competition and Consumer Commission – the last five of which were spent as a Director with primary responsibility for regulating the mobile phone industry in Australia. A copy of his CV is annexed to this report.

15 We confirm that all the opinions expressed in this report are our own, and are wholly or substantially based upon our expert specialised knowledge.

16 We are familiar with the Practice Note for Expert Witnesses in Proceedings in the Federal Court of Australia dated 1 August 2011. We have read, understood and complied with this Practice Note.

17 Dr Williams and Mr York have made all the inquiries that we believe are desirable and appropriate and that no matters of significance that we regard as relevant have, to our knowledge, been withheld from the NCC.

## 1.2 Specific Instructions

18 Frontier has been asked to:

- Assess the criteria for third parties to obtain equity participation in the Joint User Hydrant Installation (JUHI) joint venture (JUHI JV), including the principles used in the application of these criteria; and
- Provide a report assessing whether access (or increased access) to the JUHI Service would promote a material increase in competition in:
  - the market for the supply of jet fuel at Sydney Airport

- the market for the supply of into-plane services at Sydney Airport; and/or
- the domestic and international market/s for air passenger and freight services at Sydney Airport

in accordance with section 44G(2)(a) of the Competition and Consumer Act 2010 (Cth) (CCA) if, in the absence of declaration, access to the JUHI Service was provided in accordance with the criteria for equity participation.

19 In order to prepare our report, we have relied on:

- BARA’s application for declaration, including the supplementary information filed by BARA
- The confidential agreement for Ownership and operation of Joint User Hydrant Installation at Sydney (Kingsford-Smith) Airport, as amended in 2001
- The submission provided to the NCC by the Sydney JUHI titled “Submission by Sydney Airport JUHI Joint Venture regarding the BARA application for ‘Service No 1: provided by the Sydney JUHI Facility’”, dated 21 November 2011.

### 1.3 The application for declaration

20 On 26 September 2011, BARA made a written application to the NCC seeking declaration of jet fuel supply services at Sydney Airport. In particular, BARA sought declaration of:

The services provided by the Jet Fuel Storage Facility (including facilities for refuelling trucks) and Jet Fuel Hydrant Pipeline Network Facility provided by the Sydney JUHI.<sup>1</sup>

21 The Sydney JUHI involves a set of infrastructure used to supply jet fuel services at Sydney Airport, and is jointly owned and operated by 5 joint venture participants (JV participants). The JV participants are:

- The Shell Company of Australia Limited (Shell)
- BP Australia Pty Ltd (BP)
- Caltex Australia Petroleum Pty Ltd (Caltex)
- Mobil Oil Australia Pty Ltd (Mobil)
- Qantas Airways Limited (Qantas).

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<sup>1</sup> BARA, *Application for Declaration – Jet Fuel Supply Infrastructure to Sydney Airport: Service No 1: provided by the Sydney JUHI Facility*, 26 September 2011, at p. 8.

22 Further details on the JUHI facilities and services, as well as the terms and conditions of entry, exit and on-going involvement in the Sydney JUHI joint venture, are set out in section 2 below.

23 BARA describes itself as:

... the industry representative organisation representing the interests of international airlines operating to and from Australia.<sup>2</sup>

24 It also notes that it:

... represents most of the airline carriers using Sydney Airport. BARA members presently provide over 90% of the international flights to and from Sydney.<sup>3</sup>

25 In this regard, it should be noted that Qantas is also a member of BARA.

26 We understand that BARA seeks declaration of services provided by the Sydney JUHI Facility in order to increase the number of competitors able to provide jet fuel services to its members at Sydney Airport. It believes this increase in competition has the:

... potential to decrease prices and improve reliability, [and] could significantly improve overall social wellbeing given the importance to the Australian economy of international and domestic passenger and freight services to and from Sydney Airport.<sup>4</sup>

27 BARA also notes that:

The number of passengers served by Sydney Airport is expected to more than double by 2029 ...

To support this growth, the supply of jet fuel at Sydney Airport will also need to almost double from a current demand of about 2.9 GL per year to over 5.6 GL per year by 2029.<sup>5</sup>

28 Overall, BARA believes that:

Declaration of the services provided by the Sydney JUHI will promote competition for the supply of jet fuel, into-plane service services, and for airline and other jet services at Sydney Airport. If the current arrangements are allowed to continue, it is likely that the projected growth in jet fuel demand will be met from the incumbent suppliers and the potential increases in competition will be lost.<sup>6</sup>

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<sup>2</sup> *Ibid.*, at p. 7.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, at p. 5.

<sup>5</sup> *Ibid.*, at p. 1.

<sup>6</sup> *Ibid.*, at p. 5.

## 1.4 Structure of this report

29 This report is structured so that:

- Section Two sets out background details on the facilities involved in, and services provided by, the Sydney JUHI. It also sets out information on the terms and conditions by which a third party can presently acquire access to the services provided over the Sydney JUHI facilities.
- Section Three describes the principles that should be applied to determine efficient charging arrangements for the ownership, use and investment in joint venture facilities (and the services provided over them).
- Section Four compares the existing terms and conditions of access to services provided over the Sydney JUHI facilities with the principles set out in Section Three of this report to determine whether the existing arrangements are likely to promote the efficient investment in, and use of, joint venture facilities.
- Section Five considers whether, compared to existing arrangements, access (or increased access) to the services provided over the Sydney JUHI facilities would be likely to promote a material increase in competition in the relevant markets.

## 2 The JUHI facilities and existing access arrangements

30 In this section of our report, we briefly describe the facilities used to provide services at the Sydney JUHI. We then set out detail on the terms and conditions that presently exist to enable a third party to commence receiving services using this infrastructure. These terms and conditions include initial qualifying criteria and a requirement to make a purchase contribution toward the existing capital expenditure of the Sydney JUHI, as well as on-going charges for using the JUHI facilities.

### 2.1 The JUHI infrastructure and services

31 The Sydney JUHI is a set of infrastructure owned by the JV participants, and is used as a means to assist in the provision of jet fuel for both domestic and international aircraft at Sydney Airport. In this respect, there are three key stages involved in the supply of jet fuel to aircraft:

- One, the sourcing of fuel from various domestic and overseas sources, including the means by which this fuel is delivered to Sydney Airport;
- Two, the receipt, storage and distribution of this fuel once it is at Sydney Airport; and
- Three, the delivery of this fuel into aircraft.

32 The Sydney JUHI facilities are used in the second of these three stages. During this stage of the supply chain, the Sydney JUHI also performs a number of other functions, including strict quality checks at various points in the storage and distribution process; defueling in the event that aircraft require fuel to be removed; specialised hydrant and equipment repair and maintenance for all JUHI equipment located airside etc.<sup>7</sup>

#### 2.1.1 Sourcing of jet fuel and delivering it to the Sydney JUHI

33 With respect to the first stage, we understand that airlines operating out of Sydney Airport receive fuel that is sourced from a range of sources, including:

- Locally produced jet fuel from the Caltex and Shell refineries at Kurnell and Clyde;
- Other domestic refineries;

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<sup>7</sup> For a complete list of the services provided by the Sydney JUHI, refer to section B2.2 of JUHI Sydney, *Submission by Sydney Airport JUHI Joint Venture regarding the BARA application for 'Service No 1: provided by the Sydney JUHI Facility'*, 21 November 2011.

- Wholesale purchases by third parties from Australian refineries; and
- Overseas imports.

34 We also understand that the majority of jet fuel supplied at Sydney Airport is transported to the Sydney JUHI facilities via two dedicated jet fuel supply pipelines owned by Caltex and Shell, which connect to Caltex's Kurnell and Shell's Clyde refineries. We also understand that:

- There are two tie-in points on the Caltex pipeline: one at a terminal in Botany that is owned by Mobil and BP under a joint venture (but which is not currently in use); and the other at a "Vopak" bulk storage/import facility;
- There is a connecting pipeline from Shell's Clyde refinery to another terminal of Shell's at Gore Bay.

35 We understand that jet fuel can also be delivered to the JUHI via trucks.

36 The Caltex and Shell pipelines connect to the Sydney JUHI depot, which is located at the northern end of the international precinct at Sydney Airport. Before being received into the JUHI, fuel passes through metering and filtering equipment owned by Shell and Caltex.

## 2.1.2 The Sydney JUHI infrastructure and services

37 With respect to the second stage of the supply of jet fuel to aircraft at Sydney Airport, we are advised that once jet fuel is delivered into the Sydney JUHI, it is stored in 5 above-ground storage tanks. From here, fuel can be transported to aircrafts in one of two ways:

- One, via a system of underground pipelines to apron hydrants located adjacent to aircraft gates at the international and domestic terminals for distribution as needed; or
- Two, via tanker vehicles that transport jet fuel from the JUHI storage tanks to aircraft locations.

38 The facilities used to provide these services include five Jet A1 storage tanks; ten hydrant pumps used to pressurise the hydrant lines; approximately 10 kilometers of underground pipelines; approximately 190 hydrant points; hydrant connections/service pits; metering and filtering equipment etc.<sup>8</sup> Importantly, the JUHI facilities have been classified by the JV participants into three components:

- Component A, which is the JUHI depot and international underground hydrant pipeline located in the international precinct;
- Component B, which is an underground cross runway pipeline which connects the international pipeline to the domestic pipeline; and

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<sup>8</sup> For a full list of the JUHI infrastructure, refer to section B2.1 of the JUHI Sydney, *op. cit.*

- Component C, which represents the domestic underground hydrant pipeline located in the domestic precinct.

### 2.1.3 The delivery of fuel from the JUHI and into planes

39 With regard to the final stage of the supply of jet fuel at Sydney Airport, we understand that fuel is withdrawn from the JUHI system by into-plane service providers who then distribute the fuel into the aircraft itself. Fuel can be withdrawn from the JUHI system either at various points in the hydrant system via a hydrant truck; or via a fuel tanker which will load fuel from the JUHI through a dedicated location connection.

40 Importantly, the JUHI JV is not involved in the supply of jet fuel into-plane.

## 2.2 Existing access arrangements

41 Terms and conditions of access to the services provided over the Sydney JUHI facilities are generally governed by a confidential agreement entered into by the JV participants (the JV Agreement). This agreement sets out terms relating to:

- The entry of new participants into the joint venture arrangements
- On-going usage charges for access to the services provided over the joint venture facilities
- The withdrawal of participants from the joint venture arrangements.

42 Terms and conditions relating to each of these aspects of the JV Agreement are discussed in turn below.

### 2.2.1 Conditions of entry into the joint venture arrangement

43 Under the JV Agreement, a third party can gain access to the services provided using the JUHI facilities on the same terms and conditions as the existing JV participants so long as it meets certain entry requirements set out in the agreement. These requirements are set out in Clause 15 of the JV Agreement, which sets out the procedure by which any person wishing to become a participant in the joint venture arrangements shall be admitted. In essence, the entry requirements contain two key elements:

- First, a set of qualifying criteria that an applicant must meet (Clause 15.3); and
- Second, a requirement to make a purchase contribution to the existing JV participants for an ownership share in the JUHI in line with certain specified valuation principles (Clause 15.5).

44 Clause 15 of the JV Agreement also sets out a number of timeframes and procedural steps for completing an assessment of whether a particular applicant

should be accepted as a JV participant, including procedures for resolving any dispute about the size of the purchase contribution an applicant would need to make in order to become a JV participant.

### **Clause 15.3 qualifying criteria**

45 The qualification criteria set out in Clause 15.3 of the JV Agreement include:

- A requirement for an applicant to become a shareholder in Component A of the JUHI Facilities – where Component A relates to the facilities associated with the fuel depot and international underground hydrant pipeline located in the international precinct of Sydney Airport (Clause 15.3(i)).
- A requirement that if an applicant wishes to also become a shareholder in Component C (the domestic underground hydrant pipeline located in the domestic precinct of Sydney Airport), it must also become a shareholder in Component B of the JUHI Facilities. Component B refers to the underground cross runway pipeline which connects the international pipeline to the domestic pipeline (Clause 15.3(ii)).
- A requirement for the applicant to establish – where legally required – that it has a Certificate of Approval from the Civil Aviation Authority (CAA) for the distribution of aviation fluids and greases under certain sub-regulations of the Civil Aviation Regulation (Clause 15.3(iii)).
- A criterion requiring that the applicant’s demand upon the JUHI Facilities shall not in any way prejudice the use of the JUHI by the existing participants (Clause 15.3(iv)).
- A requirement for the applicant to be able to deliver to the JUHI aviation fuels sufficient to supply its customers, and that these fuels meet the product specifications defined in the JV Agreement. The applicant must also have access to laboratory testing facilities to consistently and promptly confirm the fuels meet such quality requirements (Clause 15.3(v)).
- A criterion requiring that the applicant be financially capable of fulfilling the obligations of a JV participant; have sufficient qualified manpower to perform the obligations of a JV participant; and have insurance coverage which is adequate to meet the indemnity obligations of a JV participant. In particular, an applicant must be capable of providing an into-plane fuelling service to its own customers (Clause 15.3(vi)).
- A requirement that the applicant be technically capable of assuming the obligations and responsibilities of the JV Operator when required to do so in accordance with the provisions of the JV Agreement (Clause 15.3(vii)).
- A requirement that the applicant shall comply with any other entry criteria imposed by the JV participants (Clause 15.3(viii)).

## **The JUHI facilities and existing access arrangements**

### **Clause 15.5 Purchase Contribution Valuation Elements**

46 In addition to needing to meet certain qualifying criteria, a new participant to the joint venture must also make a purchase contribution. Clause 15.5 sets out four elements that are used to estimate the size of this contribution. In this regard, the purchase contribution will be estimated on the basis of:

- First, an assessment of the current value of the JUHI, calculated by estimating the current replacement value of the facilities and deducting from this an allowance for fair physical wear and tear as is appropriate and reasonable.
- Second, augmenting this estimate with an amount to reflect pre-commissioning organisation costs, which shall be no more than 10% of the estimated current replacement value identified above.
- Third, also adding an amount to reflect the capital risk existing JV participants undertook by investing in the Sydney JUHI facilities in the past, which a new participant would not need to face when joining the joint venture at a later time. The organisational cost element plus the capital risk element shall not exceed 20% of the replacement value element, unless demonstrably incurred capital costs or capital risk are such as to make a higher percentage fair and reasonable.
- Fourth, an amount to reflect the benefit of previously negotiated advantageous arrangements that a new participant will benefit from upon being admitted as a new JV participant.

47 In the event an applicant to the joint venture does not accept the estimate of the purchase contribution, it can refer the estimate of the current replacement value at element one above to a mutually agreed independent and qualified assessor. The JV Agreement then sets out various processes by which this assessment will take place.

48 In the event a new party does join the joint venture, its purchase contribution will be divided among the existing participants in proportion to their ownership shares of the Sydney JUHI.

### **2.2.2 Usage charges for access to the joint venture facilities**

49 Once a party has become a JV participant, there are on-going terms and conditions of participation in the joint venture. In this regard, the JV Agreement contains terms and conditions relating to two types of on-going fees:

- First, terms and conditions relating to the operating costs of the JUHI; and
- Second, terms and conditions relating to an ‘inter-participant rental adjustment (IPRA)’.

50 Each of these types of term and condition are discussed in more detail below.

### **Operating Costs**

51 Under the JV Agreement, the operating costs of the JUHI are divided into fixed costs and variable costs. In this regard:

- Fixed costs relate to a number of types of cost, including site rental charges; licence fees; costs of insurance; an administration charge determined by and payable to the Operator of the joint venture facilities etc.
- Variable costs, on the other hand, include salaries; wages; cost of materials; contractor's charges; office expenses etc.

52 We understand, however, that under the joint venture arrangements, the fixed cost component of operating costs cannot exceed more than 10% of overall operating costs in any given period. To the extent that fixed costs exceed 10% of overall operating costs, the surplus over 10% is treated as variable costs.

53 Once determined, the fixed operating costs (subject to the 10% maximum requirement) referred to in the JV Agreement are then allocated between the JV participants in proportion to their shares in the JUHI. Hence, if fixed operating costs amount to \$100,000 and there are 5 equal shareholders in the Sydney JUHI, each would pay an amount of \$20,000 for the fixed operating costs of the Sydney JUHI.

54 Variable costs referred to in the JV Agreement are, on the other hand, borne by the JV participants in proportion to each participant's share of the "offtake" of product from each component of the JUHI. For instance, if variable costs amounted to \$2 million at Component A, and one particular operator throughputted 30% of fuel at Component A, it would be required to make a payment of \$600,000 to cover its proportion of the estimated variable costs of the joint venture.

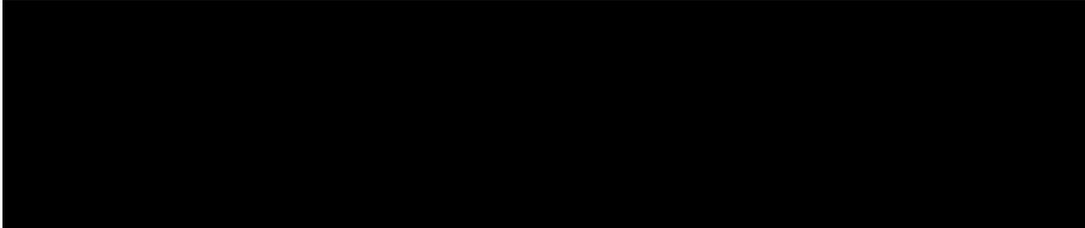
55 The variable costs are effectively paid for by the payment of "throughput charges". The size of these payments for each participant is estimated in June and December of each year based on forecasts of estimated costs and volume of throughput for each participant. Payments are made on a monthly basis in accordance with these estimates, with a reconciliation with actual throughput volume and JUHI costs occurring at 6-monthly intervals.

### **Inter-participant rental adjustment**

56 In addition to terms and conditions relating to on-going operating costs, the JV Agreement also contains arrangements that ensure those parties that use the Sydney JUHI more compensate those parties that use the Sydney JUHI less with respect to the capital costs involved in providing the Sydney JUHI facilities. This is achieved via an IPRA, the terms of which are contained in Clause 12 of the JV Agreement.

57 Under the IPRA, the operator of the Sydney JUHI will estimate a percentage ‘rental charge’ on the value of capital expenditure made in order to provide for the Sydney JUHI. This charge is set at █% per annum.

58 Once this charge has been estimated, it then forms the basis of a means for those participants who use the facilities more to compensate those participants who use the facilities less. This is done by:



59 To illustrate, suppose for a particular Component that the value of the capital expenditure on the accounts of the Sydney JUHI is \$1 million. Applying an █% rental charge to this amount generates a rental charge amount in a given 6-month period of \$█. Suppose also that there are 5 equal share owners of the particular Component in question, but that one JV participant (A) throughputs 50% of the volume of fuel through that Component; two JV participants (B and C) throughput 25% of the volume of fuel through that Component each; and the remaining two (D and E) throughput no volume through that Component in the period in question. The amounts of the rental charge debited and credited to each JV participant of this Component is set out in Table 1 below.

Table 1: Example of the operation of the IPRA

	A	B	C	D	E
IPRA Debit	█				
IPRA Credit					
Net Payment					

Source: Frontier Economics based on the JV Agreement

60 It follows, therefore, that the effect of this arrangement is that those JV participants that use a Component proportionately more than their share of the ownership of that Component make a net payment to those JV participants who use the Component proportionately less. This means, for instance, that if a JV participant does not use any of the facilities for which it has a shareholding in a given period, it will be compensated for its ownership of the facilities to some extent by those JV participants that do use the facilities.

### 2.2.3 Conditions of exit from the joint venture arrangement

61 In the event a JV participant wishes to leave the joint venture, arrangements exist to enable the departing participant to sell its ownership share to the remaining participants. In this regard, the JV Agreement *inter alia*:

- Requires a departing participant to provide at least [REDACTED] notice of its intention to leave the joint venture.
- Requires the departing participant to offer to sell its share in the Components of the JUHI for purchase by the remaining participants at [REDACTED]  
[REDACTED]
- Sets out provisions whereby the remaining participants agree to purchase the withdrawing participant's share. Each remaining participant agrees to purchase a share of the withdrawing participant's share in proportion to each participant's shareholding in the Components in which the withdrawing participant's share is held.

### 3 Efficient charging arrangements for a bottleneck facility

62 This section of the report sets out some principles by which an economist might assess the pricing arrangements for a bottleneck facility. Section 4 of this report will then assess the pricing arrangements of the Sydney JUHI against the principles that are expounded in this section.

#### 3.1 Multi-part tariffs

63 In one of the most-celebrated papers in the economics of public policy<sup>9</sup>, Ronald Coase proposed the two-part tariff as a solution to the problem of how a natural monopoly should price consistent with economic efficiency. Prior to that paper, many economists had argued that the optimal rate of consumption of a natural monopoly service would be achieved if the price for the service was set at the marginal cost of production. However, setting prices at marginal cost created a problem for incentives to invest: investment in the facility would not be viable because marginal cost is below average cost.

64 Coase's solution to this dilemma was to propose a two-part tariff. The price per unit of the service (the marginal price) should be set at marginal cost so that the rate of consumption of the service would be efficient; and the consumer of the service should make a contribution to the capital cost of the facility in the form of a lump-sum payment – that is, a payment that was not contingent upon the rate at which the service was consumed.

65 Although Coase originally proposed the two-part tariff as a way of securing efficient pricing by a natural monopoly selling services to consumers, two-part tariffs have been advocated by many economists as a possible solution to optimal pricing by an upstream natural-monopoly bottleneck producer who is supplying inputs to downstream competitors.<sup>10</sup>

#### 3.2 Optimal capital contribution

66 Coase's two-part pricing was his solution to a dilemma. If there were to be incentives to incur capital expenditure, there had to be the prospect of a return on that capital expenditure. However, if that return on capex was derived from

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<sup>9</sup> Ronald Coase, "The Marginal Cost Controversy", *Economica n.s.*, vol 13 (1946).

<sup>10</sup> See, for example, Stephen J Brown and David S Sibley, *The theory of public utility pricing*, Cambridge University Press, 1986, pp 65-71. For Australian sources, see J Freebairn and K Trace, "Efficient railway freight rates: Australian coal", *Economic Analysis and Policy*, Vol 22 (1992) pp 23-38; and Stephen King and Rodney Maddock, *Unlocking the Infrastructure*, Allen & Unwin (1996) pp 80-82.

setting the marginal price above marginal cost, then the rate of use of the capital asset would be inefficiently low. Coase's solution was to have a capital contribution that was not contingent on the rate of use of the asset in addition to a price for usage that was equal to marginal cost.

67 Although Coase showed how incentives to invest could be made compatible with incentives for optimal rate of use, he did not analyse the issue of optimal capital charges – apart from showing that they should not be related to the rate at which the user chose to utilise the capital asset. Later writers have explored the issue of optimal capital charges.

### **Incentives for optimal timing of capital expenditure**

68 One issue that has arisen in the setting of capital charges for two-part tariffs in the context of access regimes is how to create good incentives to time investment expenditure.

69 Consider a world in which parties can seek access to bottleneck infrastructure at regulated prices. If the regulator sets prices of access too low, parties will have an incentive not to seek access until after the asset has been built; and these delays in seeking access will delay investment in the bottleneck infrastructure. On the other hand, if the regulator sets prices of access too high, parties will have an incentive to race to build the bottleneck asset in order to earn high rates of return on the bottleneck investment.

70 Gans and Williams published a series of papers in the late 1990s dealing with this issue.<sup>11</sup> These papers proved that the timing of investment would be optimal if the regulator fixed capital contributions in a two-part tariff to mimic the allocation of capital contributions that would be agreed by joint venture partners if they were bargaining before the investment took place. This implied that if a party sought access after the bottleneck infrastructure had been built, that party should pay the same capital contribution as if that party had bargained over their capital contribution prior to the building of the infrastructure. In that case, the capital contribution of the access seeker should defray the capital contributions of those who bargained *ex ante*.

### **Optimal allocation of capital expenditure among parties to a JV**

71 A second issue arises in the setting of lump-sum contributions to capital expenditure. The Coasian principal is that capital charges are not to be contingent on the rate at which a party uses the asset. This seems to suggest that all parties must pay an equal contribution. However, if all parties pay an equal contribution,

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<sup>11</sup> See Joshua S Gans and Philip L Williams, "Access Regulation and the Timing of Infrastructure Investment", *Economic Record*, Vol 75 (1999) pp 127-138; and Joshua S Gans and Philip L Williams, "Efficient Investment Pricing Rules and Access Regulation", *Australian Business Law Review*, Vol 27 (1999) pp 267-277.

some parties may be excluded from using the asset at all – because the surplus over marginal cost that they gain from use will not cover their capital contributions. In this case, it may be possible to devise unequal capital contributions that are not related to the rate at which a party chooses to use the asset:

Therefore, there are two problems which must be faced in pricing the output of the regulated firm: first, to price consumption efficiently and, second, to make sure the correct number of consumers participate in the market. Sometimes there will be a tradeoff between these two goals. If marginal prices are set at or close to marginal cost, so as to generate efficient consumption, the breakeven requirement on the firm may require an entry fee so high as to price too many consumers out of the market.

There is a possibility of avoiding this tradeoff and finessing the problem. If the regulators could identify the two consumers and determine prices for each of them separately, then they could charge each consumer a different two-part tariff. Each tariff would have marginal price equal to marginal cost, but [the consumer with the lower willingness to pay would pay a lower lump-sum capital contribution than the consumer with a higher willingness to pay].<sup>12</sup>

72 A similar solution to differential lump-sum capital contributions was proposed by Gans and Williams in the case of a joint venture among miners to build a railway for common use. It was assumed that each mine had a willingness to pay for the railway that was known in advance of the investment in the railway because each mine knew the size of its deposit. In that case, they showed that *ex ante* bargaining among members of a joint venture would result in lump-sum capital contributions that differed among the parties.

73 However, the assumptions utilised by Gans and Williams to secure this result were rather special. A more-common case is that in which the tradeoff observed by Brown and Sibley obtains: because there is a tradeoff between an optimal number of users and an optimal rate of use for each user, marginal prices may need to be somewhat higher than marginal costs in order not to deter some users from using the asset.

### 3.3 Why prices based on average costs are inferior

74 In the world of regulated pricing, the traditional alternative to two-part pricing has been prices based on average costs. For almost a century, the standard view of the economics profession has been that prices based on average costs limit use of an infrastructure asset below the level that is efficient – because bottleneck infrastructure assets provide services whose average cost is significantly above marginal cost. This was the very problem to which Coase provided a solution.

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<sup>12</sup> Stephen J Brown and David S Sibley, *The theory of public utility pricing*, Cambridge University Press (1986) p 67.

75 In more-recent times, developments in game theory have taught economists that average cost pricing has another important disadvantage compared with multi-part tariffs. This is that higher marginal prices lead to softer competition.

76 The softness or toughness of competition are terms derived from game theory where they are used to describe the link between industry structure and industry pricing. That is, tough price competition refers to behaviour that results in lower prices for any particular level of market concentration.<sup>13</sup>

77 One of the key factors that determines the toughness of competition is the level of marginal costs of the firms in an industry – that is, for any given level of market concentration, a lower level of marginal costs will result in a lower level of prices. But the level of marginal costs for a downstream firm will be critically dependent on the level of marginal prices charged by the upstream supplier of inputs. That is, if the upstream bottleneck facility loads its marginal prices by seeking to recover its capital expenditure through prices based on average costs, competition will be softer in the downstream market than would be the case in a world of two-part (or multi-part) charges for the input.

78 This point was recognised by the Australian Competition Tribunal (Tribunal) in the Virgin Blue access case:

Dr Williams explained, and we accept, that the change from an MTOW-based charge to the Domestic PSC has the effect of changing the ratio of fixed costs to variable costs for the airlines. When SACL changed the tariff structure, the cost that was formerly fixed (with respect to the number of passengers on the aircraft) was converted to a cost that varied according to the number of passengers on the aircraft. The ratio of fixed to variable costs is one of the basic conditions that affects competition in the dependent market. ...

The second consequence of the change in the fixed to variable cost ratio identified by Dr Williams is that airlines are less likely to chase incremental or marginal customers and less likely to be concerned about losing marginal customers to their rivals. If a competitor were successfully to attract passengers away from another airline, the higher the costs that the airline will save by losing those marginal passengers to its competitor, the less its incentive to respond to the competitor's activities. Dr Williams explained this as a "softening" of competition. We accept that this is a likely consequence.<sup>14</sup>

79 In summary, a move by a bottleneck facility from multi-part pricing to prices based on average costs will have two bad effects. In the first place, it will increase the marginal prices of the services provided by the bottleneck facility and this will lead to an inefficient reduction in demand for these services. Secondly, it will increase the marginal costs of the firms in the downstream markets and this will soften competition in those markets.

<sup>13</sup> See John Sutton, *Sunk costs and market structure*, MIT Press (1991) p 9; and David Besanko, David Dranove and mark Shanley, *Economics of Strategy*, John Wiley, 2<sup>nd</sup> edition (2000) pp 270-272.

<sup>14</sup> *Virgin Blue Airlines Pty Limited* (2006) ATPR 42-092, paras 523 and 525.

## 4 Existing charging arrangements promote efficient investment in joint venture facilities

80 Using the principles of efficient pricing discussed in section 3, we are now able to consider whether the Sydney JUHI joint venture arrangements described in section 2 are likely to lead to efficient levels of consumption of and investment in the services provided over the Sydney JUHI facilities.

81 To recap, the discussion set out in section 3 suggests that:

- Efficient levels of investment will be viable where a firm (or collection of firms) expects to be able to earn sufficient revenues to cover all of their expected costs of such investment. These costs include both up-front capital expenditure, and on-going costs (both fixed and variable) of providing services over the relevant infrastructure.
- Allocative efficiency will be best achieved where the marginal price of a service is set equal to the marginal cost of providing the service.
- With natural monopoly infrastructure, however, the marginal cost of providing a service at all levels of market demand is likely to be below the average cost of providing the service. This means that marginal cost pricing alone will be insufficient to enable a firm to recover all of its costs of producing services over the relevant infrastructure.
- There are a number of ways that prices could be set in order to ensure investors can receive revenues sufficient to cover their total costs, although two extreme cases are often referred to in the economic literature. The first involves a two-part tariff, where consumers pay a price equal to marginal cost as well as paying a fixed fee to contribute toward the recovery of fixed costs. A second extreme option is to set prices purely on a usage basis, with prices set equal to the average cost of providing a service. An example of such pricing might involve prices set on the basis of some measure of long-run incremental cost (LRIC). Economists sometimes refer to pricing that involves a single uniform per unit charge as ‘linear’ pricing.
- Two-part tariffs are likely to lead to more allocatively efficient levels of consumption of services provided over given infrastructure than linear average cost prices. This is because average cost prices inflate price above marginal cost, thereby reducing demand for services below allocatively efficient levels. However, two-part tariffs may reduce the number of users of infrastructure services (and hence the number of competitors in downstream markets) because some users may find the size of the fixed contribution in a

**Existing charging arrangements promote efficient investment in joint venture facilities**

two-part tariff is too high relative to the profits they can expect to earn from selling final goods in downstream markets.

- This suggests some compromise between a pure two-part tariff and simple linear average cost pricing may be suitable in order to balance the allocatively efficient use of relevant infrastructure and the number of competitors in downstream markets. This compromise could involve either:
  - Each consumer paying the same price per unit of a service (set equal to marginal cost), but paying different fixed fees depending on their individual willingness to pay a fixed fee. This individual willingness to pay would be determined by the level of profit they can expect to earn from providing services in downstream markets; or
  - Fixed fees being lowered to some extent for all parties, but the marginal price for each unit of the good sold could be raised to some extent above marginal cost to recover some portion of fixed fees.
- Both of these alternative solutions should offer a more allocatively efficient level of consumption than linear average cost pricing. However, it is sometimes argued that the former method is inequitable as it involves different users paying different fixed fees. It can also be difficult to accurately implement – especially in a regulatory setting – due to difficulties in estimating individual willingness to pay in order to determine the fixed fee element of any two-part tariff, and the incentive individual users have to understate their true willingness to pay.

#### **4.1 The JV Agreement involves a compromise between a pure two-part tariff and a pure linear usage-based charge**

82 The terms and conditions for JV participants, as set out in the JV Agreement and discussed in section 2 of this report, require participants to pay both fixed and variable fees to use the Sydney JUHI facilities. In particular, JV participants are required to:

- Pay an initial purchase contribution in order to become members of the joint venture
- Pay on-going fees to cover the operating costs of the JUHI. These involve both a fixed fee in proportion to share ownership to cover some types of fixed operating costs; and a variable fee to cover variable costs (and potentially some level of fixed costs), where this fee is estimated on the basis of usage of the facilities.
- Pay for major additions, alterations or extensions of the JUHI facilities in proportion to their share of the ownership of the facilities.

**Existing charging arrangements promote efficient investment in joint venture facilities**

- Participate in an IPRA arrangement, which has the effect of converting some fixed capital costs into usage-based charges.

83 The overall effect of the charging arrangements under the JV Agreement, however, is to reduce usage-based charges below those one would expect under a simple form of average-cost pricing where all costs are recovered simply through a single usage-based charge. In order to recover the total costs of providing services using the JUHI facilities, however, participants are required to pay some level of fixed charges.

84 Relative to a single usage-based charge designed to recover average costs, the JV arrangements have the following desirable efficiency benefits:

- The inclusion of a purchase contribution has the effect of converting the fixed capital costs of investment into a fixed charge for the JV participants. This helps to reduce the marginal price JV participants pay to use the Sydney JUHI services via through-put fees, thereby more closely aligning marginal prices with the marginal costs of providing the services. This also helps to better promote competition in the relevant markets for the reasons set out in section 3.3 of this report.
- As indicated in section 3.2 of this report, Gans and Williams found that the timing of investment will be optimal if a party seeking access after bottleneck infrastructure is built is required to make the same capital contribution as if that party had bargained over their capital contribution prior to the building of the infrastructure. Prior to the building of the JUHI infrastructure, we understand that the initial JV participants made contributions to cover the fixed capital expenditure in the assets in proportion to their shareholdings. In effect, therefore, paying for initial capital expenditure in proportion to shareholdings is the bargaining outcome agreed to by the existing JV participants prior to investment taking place. The purchase contribution arrangements for a potential new JV participant seek to mimic the bargaining solution that was reached by the initial JV participants. That is, it requires new participants to make a payment (which is distributed to existing JV participants in proportion to their ownership shares) that is based on the replacement cost of capital previously invested in by the existing JV participants. In that sense, it seeks to estimate a value – adjusted for factors such as wear and tear, and compensation for risk factors and advantages arrangements previously secured by the existing JV participants – that reflects the arrangements entered into by the initial JV participants. If a new participant was not required to make an initial purchase contribution, this could have the alternative effect of distorting the timing of investment, depending on the extent to which a single through-put fee under- or over-estimates the costs of providing the services.
- Charging a fixed fee (proportional to shareholdings in the JUHI) for certain fixed operating costs and major additions, alterations and extensions of the

**Existing charging arrangements promote efficient investment in joint venture facilities**

JUHI facilities has the effect of reducing the amount of operating costs that need to be recovered through on-going throughput charges. In turn, this ensures that the marginal price of utilising services provided over the JUHI infrastructure is more closely aligned with the marginal cost of these services. In turn, this should lead to usage of the facilities that is more allocatively efficient than that which would occur if prices are set purely on a per usage/throughput basis, as these prices would need to be inflated further above costs in order to recover the fixed costs of providing the JUHI services.

- Charging a throughput fee that is largely based on the on-going variable operating costs of providing the services helps to ensure that the marginal price of using the JUHI services more closely reflects the marginal cost of providing these services. That said, it is evident that some of the cost defined to be variable costs under the JV Agreement may not fall within the economic definition of variable costs. For instance, we understand that if the estimated amount of fixed operating costs is greater than 10% of all operating costs, the surplus over 10% is allocated as variable costs. While recovery of these costs through variable throughput charges does have the effect of raising marginal prices above marginal costs for the JUHI services, this may help to encourage more users of the JUHI services. This is because, as explained in para [71] above, a pure two-part tariff (where marginal prices were set precisely at marginal cost and a fixed fee is set for each consumer equal to the share of each JV participant) may make it unprofitable for some parties to participate in the JV arrangements. Shifting recovery of some fixed costs into the on-going throughput charge may help to alleviate this concern and strike a better balance between allocatively efficient charges, and a greater number of users of (and therefore competitors using) the JUHI services.
- Similarly, the IPRA arrangements have the effect of converting recovery of some of the fixed costs associated with capital expenditure from a pure fixed fee determined in proportion to ownership shares into a fee that varies in accordance with usage of the facilities by the JV participants. This may again help to strike a better balance between achieving a more allocatively efficient use of the JUHI infrastructure and ensuring a greater number of users of the facilities.

**Existing charging arrangements promote efficient investment in joint venture facilities**

## 4.2 Conclusions on efficient pricing

85 The terms and conditions of participation in the Sydney JUHI involve a set of arrangements that represent a compromise between a pure two-part tariff and simple linear per usage/throughput charges. This is likely to:

- One, lead to a level of usage of the JUHI facilities that is more allocatively efficient than that which would occur if prices were set simply on a linear through-put charging basis;
- Two, provide better incentives with respect to the timing of capital investments as it goes some way towards mimicking the bargaining solution reached by the initial JV participants when determining the allocation of capital expenditure costs between them; and
- Three, provide for the potential for a greater number of users of the JUHI facilities than would arise under a pure two-part tariff by seeking to recover some types of fixed cost via variable usage/throughput charges. The impacts of these arrangements on the level of competition in the relevant markets is discussed further in section 5 below.

86 These conclusions suggest that the charging structure set out in the JV Agreement is more likely to promote the economically efficient operation of, use of and investment in the infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets in accordance with the stated objective of Part IIIA of the CCA.

**Existing charging arrangements promote efficient investment in joint venture facilities**



## 5 Increased access is unlikely to materially increase competition in any market

87 In this section of our report we consider whether access (or increased access) is likely to promote a material increase in competition in any of the following markets:

- The market for the supply of jet fuel at Sydney Airport;
- The market for the supply of into-plane services at Sydney Airport; and/or
- The domestic and international market/s for air passenger and freight services at Sydney Airport.

88 To do this, we first consider what arrangements are likely to exist without declaration of the Sydney JUHI services. We then consider in what way might these arrangements be changed in order to increase access to the Sydney JUHI Services. We conclude that this might be possible via a change in access arrangements that involved all costs (variable and fixed – including the costs of capital expenditure) being recovered through linear throughput charges for the services. We conclude, however, that this form of pricing would not materially increase competition in any of the relevant markets, and would instead be more likely to soften competition in these markets.

### 5.1 Likely arrangements without declaration

89 In the absence of declaration, we believe the status quo will continue. In this regard, third parties will have a means by which they can acquire access to the Sydney JUHI Services. That is, third parties are able to acquire access to the services in accordance with the terms and conditions set out in the JV Agreement.

90 Importantly, third parties are able to acquire access on the same terms and conditions as existing JV participants provided they meet the qualifying criteria set out in Clause 15.3 of the JV Agreement, and provided they are prepared to make a purchase contribution in line with the principles and associated procedures set out in Clauses 15.5 to 15.9 of the JV Agreement.

91 In our view, there is, with one exception, nothing in the qualifying criteria set out in Clause 15.3 of the JV Agreement that would appear, on its face, to represent a barrier to entry to a potential new JV participant. By a barrier to entry, economists generally mean any thing that provides a material disadvantage to a potential new entrant to a market relative to the situation facing existing market participants. In this respect, the terms and conditions set out in Clause 15.3 of the JV Agreement do not appear to provide a material disadvantage to new entrants relative to that which exists for existing operators. Any new entrant will

**Increased access is unlikely to materially increase competition in any market**

be treated equitably relative to existing JV participants, and will therefore be free to compete on its merits in the relevant markets.

92 The one caveat to this observation is Clause 15.3(viii), which states that an applicant wishing to become part of the joint venture “shall comply with any other entry criteria imposed by the Participants”. While this may give some discretion to existing operators to apply terms and conditions that could create a barrier to entry for potential new entrants, we are not aware of any evidence that this has been used in a way that has created barriers to entry for other potential new entrants. In this regard, it is noteworthy that Qantas has in the past successfully sought to become a JV participant in the Sydney JUHI despite not being an initial JV participant.

93 With regard to the requirement to make a purchase contribution in order to become a JV participant, this again does not appear to provide a material advantage to existing operators relative to potential new participants. The method by which the purchase contribution is to be estimated appears designed to treat a new participant in a way consistent with the way in which the existing participants became involved in the joint venture. That is, it seeks to value past capital investments made by the existing participants on a replacement cost basis, and then require the new participant to pay its ownership share of this investment as if the investment was been made today. The estimation procedure also includes adjustments for fair wear and tear of the physical assets. There are also protections in place for a potential new participant to seek independent assessment of this valuation if it does not find this valuation acceptable.

94 Other terms designed to compensate existing participants for pre-commissioning organisational costs and capital risk, as well as for the benefit of previously negotiated advantageous arrangements also appear, on their face, designed to treat a potential new participant on the same basis as existing participants.

95 Overall, the terms and conditions of entry for a potential new JV participant appear, by and large, designed to treat potential new entrants on a symmetric basis with existing operators. That on-going terms and conditions of participation in the joint venture after a third party joins the joint venture also treat it on a symmetric basis with existing participants suggests that the JV Agreement does not create a barrier to entry for a third party wishing to acquire access to the services. This is further supported by the terms of exit from the joint venture which require non-withdrawing parties to acquire the share of the withdrawing party, and which would treat any joint venture wishing to depart on a symmetric basis.

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## 5.2 How might declaration lead to an increase in access to the Sydney JUHI Service

96 In considering whether access (or increased access) would be likely to promote a material increase in competition in the relevant markets, we think it is important to first note that a means already exists to provide third parties with access to the Sydney JUHI Services. That is, the JV Agreement already provides a means by which new participants can gain access to the Sydney JUHI Services. In this regard, we note that there does not appear to be any evidence of the JV participants flatly denying access to third parties wishing to use the facilities. Further, Qantas has demonstrated it is possible for a new participant to become a JV participant in the Sydney JUHI.

97 It follows, therefore, that declaration is not needed to overcome issues of an infrastructure owner wishing to deny access to services provided over its infrastructure. Indeed, existing JV participants have some incentive to allow new participants as this will help to defray those costs that are shared in proportion to ownership shares in the joint venture across a larger number of owners.

98 At issue, therefore, is whether some alternative set of arrangements might be created that would lead to an increase in access to the Sydney JUHI Services. One way this could be achieved would be via regulation of the terms and conditions of access to the service. In this regard, if the Sydney JUHI Services are declared, the possibility will exist for the Australian Competition and Consumer Commission (ACCC) to set regulated terms and conditions of access to the services. In these circumstances, it is possible that the terms and conditions of access to the Sydney JUHI Service could be changed in such a way as to increase the number of users of the service. For instance, the ACCC might choose to set prices in a way that seeks to recover the total costs of providing the services via a linear through-put charge. Doing so would be likely to involve a different charging structure to that which presently exists under the JV Agreement. In particular, it would involve a greater degree of fixed costs being recovered through through-put charges than is presently the case in exchange for the removal of any fixed fee elements (including the need to make a purchase contribution) in order to attain access to the Sydney JUHI Services. This may generate an increase in the number of users of the services. This is because lowering the fixed fees a potential new participant in the Sydney JUHI faced may mean that more users find that the fixed element in any terms and conditions of access is now lower than their willingness to pay this fee. In that sense, declaration could lead to an increase in access to the service.

**Increased access is unlikely to materially increase competition in any market**

### 5.3 Increased access is unlikely to promote a material increase in competition

99 An increase in the amount of access, or an increase in the number of users, should not, however, be confused with a promotion of competition in related markets. As noted by the Tribunal in *Telstra Corporation Ltd (No 3)* [2007] ACompT3 at para [99], the promotion of competition in a market should not be confused with promoting the greatest number of competitors in a market:

Accordingly, we believe it is important not to confuse the objective of promoting competition with the outcome of ensuring the greatest number of competitors. That is, the Act aims to promote competition because of the benefits that result from the *process* of competition, such as lower prices for consumers and the displacement of inefficient suppliers by efficient suppliers of services. As the Tribunal observed in *Sydney International Airport ...* at para [108]:

*“The Tribunal is concerned with furthering competition in a forward looking way, not furthering a particular type or number of competitors.”*

(See also *Sydney Services Pty Limited* [2005] ACompT 7 at para [136].

100 For the reasons set out in section 5.4.1 and 5.4.2 below, we do not believe any increase in access that might follow from declaration of the Sydney JUHI Services would be likely to promote a material increase in competition in any relevant markets. Indeed, we believe it is more likely to *lessen* competition in these markets.

101 Further, and for the reasons set out in sections 3 and 4 of this report, the recovery of more fixed costs via variable through-put charges has the effect of increasing marginal prices for users of the facilities – thereby reducing the efficient use of and investment in facilities.

#### 5.3.1 Increased access may lessen competition by changing the marginal costs for different competitors in the relevant markets

102 In our view, the JV participants could respond in one of two ways should third parties be able to acquire access to the Sydney JUHI Services solely on the basis of through-put charges set to cover total costs (and without the need to pay any fixed fees or purchase contributions).

103 In the first instance, the existing JV participants may continue to use the Sydney JUHI Services under the terms of the JV Agreement. Importantly, this would mean that they would face a lower marginal cost of providing services in the relevant markets than those third parties seeking to acquire access under an alternative arrangement whereby their through-put charges would be set on the basis of some estimate of the average costs of providing the services. That is, in order to ensure access prices compensated the JV participants for their

**Increased access is unlikely to materially increase competition in any market**

investment in the capital and other fixed cost items necessary to provide the services, the linear through-put charge would need to be inflated above that faced by the JV participants who make contributions towards the recovery of these costs via fixed fees. The consequence of this, however, is that parties would no longer be competing in the relevant markets on an equal footing because the JV participants would face a lower marginal cost from utilising the Sydney JUHI services than third party access seekers. This is important, because it is well recognised in economics that firms set the profit maximising levels of output on the basis of equating marginal costs with marginal revenues:

The rule that profit is maximized when marginal revenue is equal to marginal cost holds for all firms, whether competitive or not.<sup>15</sup>

104 This means that where one firm faces a lower marginal cost than its rivals, it will be at a competitive advantage to them. Increased access in this way, therefore, is unlikely to represent a material increase in competition in any of the relevant markets.

### 5.3.2 Increased access may soften competition in the relevant markets by raising marginal costs

105 Alternatively, the JV participants may choose to move to adopt the same charging structure as that made available to third parties. That is, the JV participants may choose to move to an arrangement whereby they did not pay any fixed fees to cover any of the costs of providing the Sydney JUHI Services, but instead moved to pay only a single through-put charge that was set to recover all the costs of providing these services. This would, however, necessarily involve a higher through-put charge than that which presently exists where fixed costs are recovered – at least to some extent – via fixed charges for the JV participants.

106 As indicated in section 3.3 above, pricing structures that involve marginal prices of inputs based on average costs are inferior to those that involve a lower marginal price (closer to marginal costs) with some proportion of fixed costs recovered through the charging of fixed fees. In this regard, the Tribunal has previously accepted that recovering more fixed costs via marginal prices is likely to lead to a softening of competition between suppliers in those markets.

107 The charging structure set out in the JV Agreement clearly involves a compromise between a pure two-part tariff arrangement and a linear pricing structure where fixed costs are recovered through a single per unit charge based on average costs. It follows, therefore, that this pricing structure generates a lower marginal price for the Sydney JUHI Services than would be expected in the counter-factual if regulation led to all costs being recovered through linear through-put charges.

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<sup>15</sup> Pindyck, R. S., and Rubinfeld, D. L., *Microeconomics*, 2<sup>nd</sup> edition, at p. 247.

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competition in any market**

108 In turn, this suggests that while linear through-put charges may lead to greater levels of access than might occur under the terms and conditions of the JV Agreement, this would be unlikely to be access of a form that would promote competition (material or otherwise) in a dependant market. Indeed, we believe that pricing in this way would, relevant to the existing arrangements set out in the JV Agreement, lead to a softening (and therefore lessening) of competition in these markets.

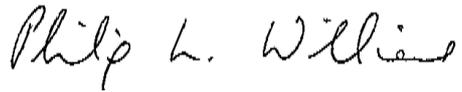
## 5.4 Conclusions

109 Under the JV Agreement, third parties are able to acquire the Sydney JUHI Services on the same terms and conditions as the existing JV participants provided they meet certain qualification criteria and are prepared to pay a purchase contribution to existing parties. On their face, these requirements do not, by and large, appear to treat a potential new participant differently to existing JV participants. In turn, this suggests there are no barriers to entry in the economic sense to third parties seeking to use the Sydney JUHI Services under the current arrangements.

110 In the alternative, declaration of the service could lead to a change in pricing structure for the Sydney JUHI Services that would involve users paying a single through-put charge, and without the need to make fixed payments or make a purchase contribution. To the extent this single through-put charge seeks to recover the fixed costs of providing the services, this will necessarily raise the through-put charge above the existing through-put charge paid by the JV participants under existing arrangements. While this may lead to more users of the Sydney JUHI, this would not represent a material increase in competition. This is because the higher through-put charge would represent a higher marginal cost for these users when they seek to compete in the relevant markets. In turn, this will lead to a softening of competition in the relevant markets and/or place third parties at a competitive disadvantage to the existing JV participants by raising their marginal costs relative to those that would be faced under the current JV Agreement.

**Increased access is unlikely to materially increase competition in any market**

Dr Williams and Mr York have made all the inquiries that we believe are desirable and appropriate and that no matters of significance that we regard as relevant have, to our knowledge, been withheld from the NCC.



Dr Philip Williams

Mr Richard York

Increased access is unlikely to materially increase  
competition in any market



## Annexure - CVs

NAME:	PHILIP WILLIAMS
Profession:	Economist



Philip Williams is the Chairman of Frontier Economics (Australia). His key area of expertise is the relationship between economics and the law, and he provides economic advice to clients in the areas of trade practices, valuing damages, intellectual property and contractual disputes. He also consults on access and regulatory issues.

Philip's strength in advising clients lies in his:

- Knowledge and familiarity with the application of economic concepts in court and tribunal proceedings, which derives from his extensive experience as an expert witness;
- Detailed knowledge of the regulatory and legal frameworks which any economic analysis must accept as given; and
- Ability to provide frank and independent advice to clients.

He is valued by clients and colleagues for his ability to synthesise complex economic arguments and present them simply and clearly.

Philip has advised the Australian Competition and Consumer Commission (ACCC), the National Competition Council (NCC) and the New Zealand Commerce Commission. He has been retained by all of the leading law firms in Australia and New Zealand to give advice on disputes relating to access and regulatory issues, as well as competition and general commercial litigation.

Prior to joining Frontier, he taught full-time at the University of Melbourne from 1978 to February 2002, when he resigned as Professor of Law and Economics in the Melbourne Business School at the University.

In addition to his role at Frontier, he is a member of the Trade Practices Committee of the Law Council of Australia and is Deputy President of the Board of the Epworth HealthCare.

## KEY EXPERIENCE

### Evidence before Federal Court or Australian Competition Tribunal

- Bruce McHugh v Australian Jockey Club Limited [2011].

- Sportsbet Pty Ltd v State of Victoria [2011] FCA 961.
- Sportsbet Pty Ltd v Harness Racing Victoria (2011)
- Sundararajah v Teachers Health Fund (2011).
- ACCC v TF Woollam & Son Pty Ltd (2011) ATPR 42-367.
- Application by Fortescue Metals Group Limited (2010) ATPR 42-319.
- ACCC v Australian Abalone Pty Ltd (2007) ATPR 42-199.
- RP Data Limited v State of Queensland (2007) ATPR 42-196.
- Seven Network Limited v News Limited and others (2007) ATPR (Digest) 46-274.
- Application by Services Sydney Pty Limited (2006) ATPR 42-099.
- Virgin Blue Airlines Pty Limited (2006) ATPR 42-092.
- ACCC v Leahy Petroleum Pty Ltd and others (2004) ATPR 46-260.
- Re EFTPOS Interchange Fees Agreement (2004) ATPR 41-999.
- ACCC v Australian Safeway Stores Pty Limited (2002) ATPR (Digest) 46-215.
- Stirling Harbour Services v Bunbury Port Authority (2000) ATPR 41-752;
- Review of Declaration of Certain Freight Handling Services Provided by Sydney Airports Corporation Ltd (2000) ATPR 41-754;
- Re Australasian Performing Rights Association Limited (1999) ATPR 41-701;
- 7-Eleven Stores Pty Ltd and Independent Newsagents' Association; Australian Newsagents' Federation Limited, Newsagency Council of Victoria (1998) ATPR 41-666;
- Australian Association of Convenience Stores and Queensland Newsagents Federation; 7-Eleven Stores Pty Ltd (1994) ATPR 41-357;
- QIW Retailers Limited v. Davids Holdings Pty. Limited and others (1993), ATPR 41-226;
- TPC v. Arnotts Limited (unexpurgated version) (1990) ATPR 41-062;
- Queensland Wire Industries Pty. Limited v The Broken Hill Proprietary Company Limited (1989) 167 4 CLR 177;
- John Dee (Export) Pty. Limited (1989) ATPR 40-938.

### **Evidence before High Court of New Zealand**

- Commerce Commission v Air New Zealand and others (2011) CIV-2008-404-8352;

- Woolworths Limited v Commerce Commission (2007) CIV 2007-485-1255;
- Commerce Commission v Port Nelson Ltd (1994) CP 12/92;
- Air New Zealand Limited v Commerce Commission and others (1993) CP No. 932/90;
- Clear Communications Limited v Telecom Corporation of New Zealand Limited and others (1992) CP 590/91;
- Union Shipping NZ Limited v Port Nelson Limited (1990) 3 NZBLC 101,618;
- New Zealand Magic Millions Ltd v Wrightson Bloodstock Ltd (1990) 1 NZLR 662;
- Tru Tone Ltd v Festival Records Retail Marketing Ltd (1988) 2 NZBLC 103-081, (HC) (1988) 2 NZLR 352, (CA).

## CAREER

2002 - present	Executive Chairman, Frontier Economics
1988 - 2002	Melbourne Business School, University of Melbourne
1978 - 1988	Economics Department, University of Melbourne
1973 - 1977	Ph D Student, London School of Economics
1970– 1973	Non-tenured tutor, Department of Economics, Monash University

## EDUCATION

1977	Ph D London University (LSE)
1973	M Ec Monash University

## PUBLICATIONS

### Books

- (With John Alford and Royston Gustavson) *The Governance of Australia's Courts: A Managerial Perspective* (Australian Institute of Judicial Administration, 2004).

- (Edited with Frances Hanks) *The Twenty-Fifth Anniversary of the Trade Practices Act: A Celebration and a Stocktake* (Federation Press, 2001).
- (With Megan Richardson, Joshua Gans & Frances Hanks) *The Benefits and Costs of Copyright, an Economic Perspective* (Centre for Copyright Studies, 2000).
- (With Tim Fry, Charles Hyde and Richard Scheelings) *Review of Scales of Legal Professional Fees in Federal Jurisdictions* (Canberra, Attorney-General's Department, 1998).
- (Edited with Megan Richardson) *The Law and the Market: Essays in Honour of Maureen Brunt* (Melbourne, The Federation Press, 1995).
- (With Ross A Williams, Andrew J Goldsmith, & Patricia A Browne) *The Cost of Civil Litigation before Intermediate Courts in Australia* (Melbourne, Australian Institute of Judicial Administration, 1992).
- (With R E Caves, I D S Ward, & J C G Wright) *Australian Industry: Structure, Conduct, Performance* (Melbourne, Prentice-Hall, 2nd ed., 1987).
- *What is the Problem of Small Business?* CEDA Monograph (Melbourne, Committee for Economic Development of Australia, 1983).
- (With R E Caves, I D S Ward, & J C G Wright) *Australian Industry: Structure, Conduct, Performance* (Melbourne, Prentice-Hall, 1981).
- *The Emergence of the Theory of the Firm* (London, MacMillan, 1978).

## Journal Articles

- "Survey evidence in valuing copyright: recent decisions of the Copyright Tribunal", *Australian Intellectual Property Law Bulletin*, Vol 23, No 2, 2010, pp 27-29.
- (With Warwick Davis), "Structural separation in Australia, economic and policy issues", *Telecommunications Journal of Australia*, Vol 58, May 2008, 11.1-11.13.
- (With Andrew Harpham and Donald Robertson), "The Competition Law Analysis of Collaborative Structures", *Australian Business Law Review*, Vol 34, December 2006, 399-427.
- (With Joshua S Gans and David Briggs), "Intellectual Property Rights: A Grant of Monopoly or an Aid to Competition?", *Australian Economic Review*, Vol 37, No 4, December 2004, 383-90.
- (With Chander Shekhar), "Should the pre-notification of mergers be compulsory in Australia?" *Australian Economic Review*, Vol 37, No 4, December 2004, 1-8.

- (With Joshua S Gans and Rajat Sood), “The Decision of the High Court in Rural Press: How the literature on credible threats may have materially facilitated a better decision,” *Australian Business Law Review*, Vol 32, No 5, October 2004, 337-44.
- (With Graeme Woodbridge), “The Relation of Efficiencies to the Substantial Lessening of Competition Test for Mergers: Substitutes or Complements?” *Australian Business Law Review*, Vol 30, No 6, December 2002, 435-44.
- (With Charles E. Hyde), “Necessary costs and expenditure incentives under the English rule”, *International Review of Law and Economics*, Vol 22, 2002, 133-52.
- (With Joshua Gans and Frances Hanks), “The Treatment of Natural Monopolies under the Trade Practices Act: Four Recent Decisions”, *Australian Business Law Review*, Vol 29, No 6, December 2001, 492-507.
- “The Decision of the High Court in *Melway Publishing v Robert Hicks*”, *Melbourne University Law Review*, Vol 25, No 3, December 2001, 831-42.
- (With Megan Richardson, Joshua Gans and Frances Hanks), “Benefits and costs of copyright: an economic perspective”, *Australian Intellectual Property Law Bulletin*, Vol 13, 2000, Part 1, Number 5, pp 62-65; Part 2, Number 6, pp 79-92.
- (With Joshua S Gans), “Efficient Investment Pricing Rules and Access Regulation”, *Australian Business Law Review*, Vol 27, 1999, pp 267 – 79.
- (With Joshua S Gans), “Access Regulation and the Timing of Infrastructure Investment”, *Economic Record*, Vol 75, No 229, 1999, pp 127 – 137.
- “Entry Deterrence and the Efficient Component Pricing Rule”, *Australian Economic Review*, Vol. 30, No. 2, 1997, pp. 185-6.
- “The Trade Practices Act and the Conditions of Entry”, *Australian Economic Review*, No. 108, 1994, pp. 108-11.
- “The Exercise of Market Power: Its Treatment under the Australian and New Zealand Statutes”, *Review of Industrial Organization*, Vol. 9, 1994, pp. 607-26.
- (With Ross A Williams), “The Cost of Litigation: An Empirical Study”, *International Review of Law and Economics*, Vol. 14, 1994, pp. 73-86.
- “Mabo and Inalienable Rights to Property”, *Australian Economic Review*, No. 103, 1993, pp. 35-8.
- (With Jeff Borland), “An Economic Analysis of the Division of Copyright between Newspaper Publishers and Journalists”, *University of New South Wales Law Journal*, vol. 16, 1993, pp. 351-62.
- (With Ross A Williams), “Competition and the Cost of Justice”, *Policy*, vol. 8, Spring 1992, pp. 22-24.

- “Marshallian Applied Welfare Economics: The Decline and Fall”, *Economie Appliquee*, vol. 43, 1990, pp. 231-245.
- (With Frances Hanks), “Implications of the decision of the High Court in Queensland Wire”, *Melbourne University Law Review*, vol. 17, June 1990, pp. 437-461.
- (With Frances Hanks), “Queensland Wire Industries v. BHP, Judgment of the High Court of Australia”, *Common Market Law Review*, vol. 27, 1990, pp. 151-61
- “Competitive Aspects of Electronic Funds Transfer Systems: The Emerging Pattern of Point-of-Sale Networks”, *Australian Economic Review*, 1st Quarter, 1987, pp. 31-8
- (With Frances Hanks), “The Treatment of Vertical Restraints Under the Australian Trade Practices Act”, *Australian Business Law Review*, vol. 15, April 1987, pp. 147-168. Reprinted in John Duns and Mark Davison, *Trade Practices and Consumer Protection: Cases and Materials* (Sydney, Butterworths, 1994).
- “A Reconstruction of Marshall’s Temporary Equilibrium Pricing Model”, *History of Political Economy*, vol. 18, Winter 1986, pp. 639-53.
- (With Neville R Norman), “The Analysis of Market and Competition under the Trade Practices Act: Towards the Resolution of Some Hitherto Unresolved Issues”, *Australian Business Law Review*, vol. 11, December 1983, pp. 396-420
- “Monopoly and Centralisation in Marx”, *History of Political Economy*, vol. 14, Summer 1982, pp. 228-41
- “Welfare and Collusion: Comment”, *American Economic Review*, vol. 72, March 1982, pp. 272-5.
- “The ABG Decision: Competition or Fair Shares?”, *European Law Review*, vol.2, August 1977, pp. 294-301.

### Chapters in books

- “Industry and Trade”, in Tiziano Raffaelli, Giacomo Becattini and Marco Dardi (eds), *The Elgar Companion to Alfred Marshall* (Edward Elgar, 2006).
- (With Graeme Woodbridge), “Antitrust Merger Policy: Lessons from the Australian Experience”, in Takatoshi Ito and Anne O. Kruger (eds), *Governance, Regulation, and Privatization in the Asia-Pacific Region*, NBER - East Asia Seminar on Economics Volume 12, (University of Chicago Press, 2004).
- (With Maureen Tehan), “Mabo and Inalienable Rights to Property: The Efficiency and Justice of the New Legal Norm”, in Megan Richardson and Gillian Hadfield (eds) *The Second Wave of Law and Economics* (The Federation Press, 2001).

- “The Role of the Expert Witness in *Tru-Tone v Festival Records: Further Progress to the Recognition of Cluster Markets Down Under*”, in Daniel J Slottje (ed) *The Role of the Academic Economist in Litigation Support* (Elsevier, 1999).
- (With Joshua S. Gans) “A Primer of Access Regulation and Investment” in M. Arblaster and M. Jamison (eds) *Infrastructure Regulation and Market Reform: Principles and Practice* (ACCC/PURC, 1998).
- “The Bottleneck Problem and Access Pricing” in Megan Richardson (ed) *Deregulation of Public Utilities: Current Issues and Perspectives* (Centre for Corporate Law and Securities Regulation, 1996).
- “What Prices Should Public Utilities Charge? The Case of Victoria’s Electricity Reforms”, in Megan Richardson (ed) *Deregulation of Public Utilities: Current Issues and Perspectives* (Centre for Corporate Law and Securities Regulation, 1996).
- “Interconnection Prices in Local Telephony: The Implications of Symmetry”, in Bureau of Industry Economics, 1995 *Industry Economics Conference, Papers and Proceedings* (AGPS, 1995).
- (With David Lindsay) “The Trade-Off Between Competition and Efficiency in Telecommunications: The Australian Experience”, in Megan Richardson and Philip Williams (eds.), *The Law and the Market: Essays in Honour of Maureen Brunt*, (The Federation Press, 1995).
- (With Robert Officer) “The Public Benefit Test in an Authorisation Decision”, in Megan Richardson and Philip Williams (eds.), *The Law and the Market: Essays in Honour of Maureen Brunt*, (The Federation Press, 1995).
- “Corporate Groups: the Management Dilemma”, in Michael Gillooly (ed.), *The Law Relating to Corporate Groups* (The Federation Press, 1993).
- (With Andrew J Goldsmith, Ross A Williams, & Patricia A Browne), “The AIJA Project on the Cost Benefit Efficiency of the Practice and Procedure of Civil Litigation in Australia”, in *Papers Presented at the Ninth Annual AIJA Conference*, Melbourne August 1990 (Australian Institute of Judicial Administration, 1991).
- “The Attitudes of the Economics Professions in Britain and the United States to the Trust Movement, 1890 - 1914”, in John D Hey and Donald Winch (eds.), *A Century of Economics: 100 years of the Royal Economic Society and the Economic Journal* (Basil Blackwell, 1990).
- “Why Regulate for Competition?”, in Michael James (ed.), *Regulating for Competition?* (Centre for Independent Studies, 1990). Reprinted in John Duns and Mark Davison, *Trade Practices and Consumer Protection: Cases and Materials* (Butterworths, 1994).

- “The Place of Industry and Trade in the Analysis of Alfred Marshall”, in Ken Tucker and C Baden Fuller (eds.), *Firms and Markets: Essays in Honour of Basil Yamey* (Croom Helm, 1986).
- “The Problem of Proving ‘Arrangement or Understanding’ under Section 45A of the Trade Practices Act”, in Ross Cranston & Anne Schick (eds.), *Law and Economics* (Australian National University, 1982).

<b>NAME:</b>	<b>RICHARD YORK</b>
Profession:	Economist



Richard provides clients with economic advice and analysis in relation to competition issues and regulation of markets, as well as litigation support in these areas. Richard's key areas of expertise include the design and application of third-party access regimes; economic regulation of telecommunications networks (especially in relation to mobile phone networks); and the application of trade practices legislation in Australia and New Zealand. He has particular experience in market analysis (market definition and market power); threshold questions of whether to regulate third-party access services; design of access pricing principles; practical setting of regulated prices (via voluntary undertakings and arbitrations); court appeals of regulatory decisions; anti-competitive pricing conduct; retail price control regulation and universal service obligation regimes.

Clients benefit from Richard's:

1. detailed knowledge of the regulatory and legal frameworks that govern the telecommunications industries in Australia and New Zealand
2. thorough, well-reasoned and independent economic analysis
3. broad range of regulatory, legal and commercial perspectives, given his experience working for regulators, the courts and regulated utilities
4. ability to communicate complex economic concepts in an easy-to-understand intuitive manner.

Prior to joining Frontier Economics in December 2009, Richard worked for two years as the Regulatory Affairs Manager at Vodafone New Zealand. Before this, he worked as the Economic Associate to the Australian Competition Tribunal, and spent almost eight years working for the Australian Competition and Consumer Commission – the last five of which were spent as a Director with primary responsibility for regulating the mobile phone industry in Australia.

In addition to his role at Frontier, Richard is a Senior Fellow within the Melbourne Law School at the University of Melbourne, where he teaches a post-graduate course on the Law and Economics of Access Regulation.

He has also served on the Victorian Branch Council of the Economic Society of Australia, and is presently a member of the Business Law Section of the Law Council of Australia.

## KEY EXPERIENCE

### Frontier Economics

- ***Expert Reports on Access Pricing for the Mobile Terminating Access Service:*** Frontier wrote two expert reports for Vodafone Hutchison Australia to support its submission to the ACCC's inquiry into the mobile terminating access service. One report considered arguments for using the depreciated actual/historic costs of the smallest mobile operator along with the forward looking cost of an efficient operator in setting mobile terminating charges. The second report detailed the results of a welfare model prepared by Frontier to analyse the effect of reductions in mobile termination charges in fixed and mobile markets. (2011)
- ***AEMC Market Power Consultation Paper:*** Frontier drafted a report for the National Generators Forum responding to questions and issues raised in the Australian Energy Market Commission's Consultation Paper on generator market power in the National Electricity Market (2011).
- ***Submission on New Zealand's Telecommunications Amendment Bill:*** Frontier was engaged by 2degrees - a mobile network operator in New Zealand (NZ) - to prepare a submission in response to the release of a proposed Telecommunications Amendment Bill. The proposed Bill covered issues relating to the NZ government's policies to provide subsidies to private firms to invest in ways that would improve the delivery of high-speed broadband services in urban and rural parts of the country. The Bill also contained provisions relating to the way in which these subsidies would be funded, and the ability of winning bidders to make undertakings to the government to enable non-discrimination and open access to infrastructure built through subsidised investment. Frontier found that open access obligations imposed on winning bidders were limited, and unlikely to be sufficient to promote competition in telecommunications markets in NZ (2011).
- ***Review of the Western Australian Rail Access Code:*** Frontier provided a report for Co-operative Bulk Handling Ltd (CBH) that analysed and critically reviewed the Western Australian (WA) rail access regime and the operation of the WA Railways Access Code. The report was prepared as part of a review of the Code by the Economic Regulation Authority of WA. CBH is a bulk handler of grain that is investing in rail locomotives and carriages to carry grain on rail networks in WA. The Code contains important principals that can be used to determine prices it will pay for access to railway lines in WA. Our report found a number of concerns with the operation of the Code and the way asset valuations are presently estimated. The report also made

recommendations to move away from asset valuation methodologies currently contained in the Code (2010).

- ***Third-Party Access to Railway Stations and Platforms:*** Frontier was engaged by Queensland Treasury to write a report providing an assessment of whether railway stations and platforms should remain declared for third party access according to the criteria contained in the Queensland Competition Authority Act 1997. The report recommended continued declaration (2010).
- ***Regulatory advice to Vector New Zealand:*** Frontier advised Vector in relation to regulatory issues surrounding the structural separation of Telecom and Vector's bid to provide ultra-fast broadband services in New Zealand (2010).
- ***Submission to the ACCC's draft report on fixed access pricing principles:*** Frontier prepared a report on behalf of the Competitive Carriers' Coalition in response to the ACCC's draft report on fixed access pricing principles. This included analysis of:
  - the principles by which the ACCC set the opening regulatory asset base
  - forecasts for capital expenditure and operating expenditure
  - cost allocation factors which were used to allocate costs between Telstra and access seekers, and between regulated services
  - the incentive properties of the proposed regime
  - the approach taken to the setting of prices for the line sharing service (2010).
- ***Advising NBN Co on its Special Access Undertaking:*** Frontier was engaged by NBN Co to review and develop aspects of its Special Access Undertaking to be lodged with the ACCC. This included advice relating to:
  - the rate of return (WACC) suitable for a greenfield investment of the kind contemplated by NBN Co
  - pricing levels and structures, including to what degree NBN Co should constrain its pricing flexibility to encourage investment
  - incentive regulation (2010).
- ***Submission to the ACCC on its Review of Fixed Line Access Pricing Principles:*** Frontier prepared a report for the Competitive Carriers' Coalition (CCC) on the Australian Competition and Consumer Commission's (ACCC) review of fixed line access pricing principles. In this report, we analysed three key issues:
  - whether and how the ACCC should set the regulatory asset base for the fixed line access provider, including whether it should continue to revalue the asset base as it had done historically

- how, in a fixed asset base framework, incentive mechanisms can be used to ensure efficient investment over time
- whether vertically-integrated access providers should be given flexibility to allocate common costs in the form of a broad price control, or whether the ACCC should mandate individual service price controls to mitigate concerns about anti-competitive behaviour.

Our analysis formed the basis of submissions by members of the CCC (2010).

- ***Collective bargaining at Perth Airport:*** Companies offering car hire services from Perth Airport notified the Australian Competition and Consumer Commission (ACCC) of arrangements whereby they would engage in collective negotiations with the Airport. Frontier was retained by solicitors for one of the car hire companies (Hertz) to provide an opinion as to the effects of the proposed arrangements on economic efficiency. Hertz submitted the report to the ACCC as part of their submissions (2010).
- ***Advice on Price Discrimination by an Access Provider:*** Frontier was engaged by a regulatory authority to provide it with advice on whether restrictions should be imposed on the ability of an access provider to price discriminate between access seekers. Our analysis considered both the relevant economic literature, and the operating conditions of the access provider. We identified circumstances in which price discrimination could be detrimental to efficiency, competition and equivalence of access (2009).

## Vodafone New Zealand

- *Price regulation of mobile terminating access services (MTAS).* Led Vodafone New Zealand's (VFNZ's) participation in the Commerce Commission's Schedule 3 Investigation into whether it should regulate the price of mobile termination services for voice and SMS services. This included developing VFNZ's position, preparation of detailed written submissions and representation of VFNZ at public hearings in this matter (2008-09).
- *Price regulation of National Roaming.* Managed VFNZ's involvement in the Minister of Communications consideration of whether to regulate the price of national roaming in New Zealand, and assisted in developing VFNZ's position during subsequent Commerce Commission considerations of whether it should launch a further Schedule 3 Investigation into whether to regulate the service (2007-09).
- *Telecommunications Service Obligation (TSO).* Led VFNZ's involvement in the Commerce Commission's assessments of the amount to be paid by VFNZ to Telecom under the TSO regime in New Zealand, including via the preparation of written submissions; presentation at Commerce Commission

public hearings; and the development of appeal proceedings in the High Court of New Zealand (2007-09).

- *Mobile Co-location Standard Terms Determination (STD)*. Assisted VFNZ's involvement in all aspects of the Commerce Commission's Mobile Co-location STD process, including leading the development of VFNZ's economic regulatory position and its involvement in the Commerce Commission's public hearings on this matter (2008).
- *Authorisation clearance to acquire 900MHz spectrum*. Led VFNZ's successful attainment of authorisation to acquire 900MHz spectrum under the New Zealand's Commerce Act (2007-08).
- *Competition law considerations associated with retail pricing propositions*. Assisted VFNZ in developing business cases by advising on the competition law risks and implications of various offerings. This included assisting VFNZ in responding to Commerce Commission considerations of various retail pricing practices, including the bundling of fixed-line and mobile services, and handset-locking propositions (2007-09).

## Australian Competition Tribunal

Richard assisted the Australian Competition Tribunal and the Federal Court in their consideration of the following matters:

- *Re: Final decision by the Australian Competition and Consumer commission (ACCC) in respect of an ordinary access undertaking submitted by Telstra Corporation Limited in relation to the Unconditioned Local Loop Service (ULLS)*. Provided economic advice to assist the Tribunal to consider an appeal by Telstra Corporation Limited of a decision by the ACCC to reject an access undertaking in relation to the ULLS. The principle issue in dispute was whether it was reasonable under the Trade Practices Act for Telstra to set geographically averaged charges for the ULLS (2007).
- *BHP Billiton Iron Ore Pty Ltd v The National Competition Council*. Provided economic advice to assist the presiding judge in his consideration of whether the Mt Newman and Goldsworthy railway lines operated by BHP Billiton in the Pilbara region of Western Australia represented 'services' or 'production processes' within the meaning of s. 44B of the Trade Practices Act (2006-07).
- *Re: Application by Fortescue Metals Group Ltd in relation to the Mt Newman railway line*. Assisted the Tribunal in the early stages of its consideration of whether to declare access to the Mt Newman railway line in the Pilbara region of Western Australia (2006-07).
- *Re: Final decision by the ACCC in respect of an ordinary undertaking submitted by Telstra Corporation Limited for the Line Sharing Service (LSS)*.

Provided economic advice to assist the Tribunal in its consideration of an appeal, by Telstra, of an ACCC decision to reject an undertaking in relation to the LSS (2006).

- Re: Victorian Farmers federation Chicken meat growers' boycott authorisation. Provided economic advice to assist the Tribunal in its consideration of an appeal of ACCC authorisation determination that allowed chicken meat growers in Victoria to engage in collective bargaining and collectively boycott chicken meat processors in certain restricted circumstances (2006).
- Re: Application by Michael Jools, President of the New South Wales Taxi Drivers Association, for review of Determinations by the ACCC not to revoke authorisations made in favour of taxi networks. Helped the Tribunal in its consideration of whether to revoke authorisations previously made by the ACCC that permitted taxi operators engage in third-line forcing behaviour whereby they could penalise or suspend taxi drivers who did not display taxi hiring accounts or credit systems approved by the relevant network (2006).
- Re: Application by Medicines Australia Inc. For Review of a Determination by the ACCC granting authorisation of Medicines Australia's code of conduct. Assisted the Tribunal in its consideration of a challenge to conditions imposed on an ACCC authorisation of Medicines Australia's code of conduct in relation to the provision of information, advertising and promotional activities by pharmaceutical companies (2007).

## ACCC

During his time at the ACCC, Richard held positions in the Telecommunications Group, the Gas Group and the Enforcement Group. Some of his relevant experiences in this area include:

- *Mobile Services Review*. Managed all aspects of the ACCC's inquiries into whether to regulate mobile termination; mobile origination; domestic roaming; international roaming and 3G mobile services (2002-05).
- *Mobile terminating Access Service (MTAS) undertakings*. Led the initial stages of the ACCC's consideration of access undertakings provided by Vodafone Australia and SingTel Optus in relation to the mobile termination access service (MTAS) (2004-05).
- *MTAS arbitrations*. Case managed 11 access disputes in relation to the MTAS involving Vodafone Australia and SingTel Optus as access providers.
- *3G infrastructure sharing arrangements*. Managed the ACCC's consideration (and ultimate approval) of two separate 3G mobile infrastructure sharing

arrangements between Telstra and Hutchison Telecommunications, and Vodafone Australia and SingTel Optus (2004).

- *Anti-competitive pricing allegations in relation to 'Telstra Big Pond' broadband internet pricing.* Managed the ACCC's economic analysis of whether the combination of Telstra's retail pricing for broadband internet services and its wholesale terms and conditions of access to broadband services represented anti-competitive conduct in respect of the Trade Practices Act (2004).
- *Vodafone Australia Federal Court.* Managed the ACCC's successful defence of an appeal by Vodafone Australia of its MTAS pricing principles determination in the Federal Court of Australia (2004-05).
- *Internet interconnection declaration inquiry.* Led preparation and release of the ACCC's Issues Paper regarding whether it should declare internet interconnection (i.e. 'peering') services (2003)
- *Line Sharing Service (LSS).* Managed the ACCC's inquiry into whether it should declare (ie regulate) a LSS in Australia. (2001-02).
- *ACCC annual price monitoring reports.* Managed preparation of the ACCC's 2000-01, 2001-02, 2002-03 and 2003-04 annual reports to Minister of Communications, Information Technology and the Arts on 'Price changes for telecommunications Services' (2001-05).
- *Non-dominant Public Switched Telecommunications Network (PSTN) pricing principles.* Managed release of the ACCC's pricing principles for non-dominant PSTN services (2002).
- *Local Carriage Service (LCS) arbitrations.* Managed the final stages of the ACCC's access disputes in relation to the LCS.
- *Review of retail price control arrangements.* Managed all stages of the ACCC's review of retail price control arrangements applying to Telstra for the Minister of communications, Information Technology and the Arts (2000-01).
- *Weighted average cost of capital (WACC).* Led the ACCC's estimation of a WACC for the purposes of assessing Telstra's PSTN originating and terminating access services undertaking (2000).
- *Local Carriage Service (LCS) pricing principles.* Developed and drafted the ACCC's pricing principles for access to the LCS (i.e. local call resale service) (2000).
- *Anti-competitive pricing of commercial churn.* Developed economic arguments underpinning the ACCC's issue of Competition Notices under Part XIB of the Trade Practices Act against Telstra's pricing of commercial churn services (i.e. the prices charged to its competitors to facilitate consumers moving from Telstra to its competitors) (1999).

## CAREER

Dec 2009 to date	Consultant, Frontier Economics
April 2007 to date	Senior Fellow (Graduate Program), The Melbourne Law School, University of Melbourne
Nov 2007 – Nov 2009	Regulatory Affairs Manager, Vodafone New Zealand
Nov 2005 – Nov 2009	Economic Associate, Australian Competition Tribunal
Sept 2000 – Nov 2005	Director, Regulatory - Telecommunications, Australian Competition and Consumer Commission
Jan 2000 – Sept 2000	Assistant Director, Regulatory – Telecommunications Regulatory, Australian Competition and Consumer Commission
Dec 1998 – Jan 2000	Various positions – Economist and Senior Economist, Telecommunications Group, Australian Competition and Consumer Commission
Feb 1998 – Dec 1998	Graduate, Australian Competition and Consumer Commission
Feb 1995 – Feb 1998	Assistant Lecturer, Department of Economics, Monash University, Melbourne, Australia

## EDUCATION

1991 - 1994	Bachelor of Economics (1 <sup>st</sup> Class Honours), Monash University, Melbourne, Australia
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## PUBLICATIONS

- Albon, R and York, R. (2008), Should Mobile Subscription be Subsidised in mature markets, *Telecommunications Policy*, 32, 294 – 306.
- York, R and Singh, J. (2007), Tribunal tableaux, *Trade Practices Law Journal*, 15, 253 – 257.

- Albon, R and York, R. (2006), Mobile Termination: market power, externalities and their policy implications, Telecommunications Policy, 30, 368 – 384.
- York, R. (2011), Where Convergence Exposes Divergence, Frontier Economics Bulletin.
- York, R. (2010), Third Time Lucky – Mobile Termination regulation in New Zealand, Frontier Economics Bulletin.



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