

**Caltex Jet Fuel Pipeline –
Assessment of Declaration Criteria**
A report for Gilbert + Tobin Lawyers

29 November 2011

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1. Introduction

My name is Gregory John Houston and I am a Director of the global firm of expert economists, NERA Economic Consulting, and head of its Australian operations, based in Sydney.¹ I have been asked by Gilbert + Tobin to prepare this report on behalf of Caltex Australia Petroleum Pty Limited (Caltex). Its subject is the application under section 44F of Part IIIA of the *Competition and Consumer Act 2010* (CCA) by the Board of Airline Representatives of Australia (BARA) seeking declaration of the service provided by a pipeline owned by Caltex (the application). The Caltex pipeline is used for the transport of jet fuel to the Joint User Hydrant Installation (JUHI) fuel facility at Sydney airport.

In preparing my report, I have been asked to address whether the application by BARA meets section 44(G)(2)(a) of the CCA. This section – known as ‘criterion (a)’ – states that the National Competition Council (NCC) cannot recommend that a service be declared unless it is satisfied that:

‘[A]ccess (or increased access) to the service would promote a material increase in competition in at least one market, other than the market for the service’.

However, for reasons that I explain below, I have found it convenient also to consider whether the application meets section 44(G)(2)(b) of the CCA. This section – known as ‘criterion (b)’ – requires the NCC to be satisfied that:

‘[I]t would be uneconomical for anyone to develop another facility to duplicate the service’.

In making both assessments I have drawn on the material available in BARA’s various submissions to the NCC,² the 21 November 2011 submission prepared by Caltex as well as other documents.³ A complete list of the materials upon which I have relied is attached at appendix A. The remainder of my report is structured as follows:

- § section two describes the Caltex pipeline serving Sydney airport and its role in the supply chain by which jet fuel is moved from either refining or import facilities located in the greater Sydney area to the storage and distribution infrastructure at Sydney airport, and then into planes;
- § section three provides my analyses of matters arising under criterion (b), since whether or not it is economical to provide the service by means of one or more other facilities is a logical precursor to the analysis of the effect on competition of access to the Caltex pipeline;

¹ A copy of my curriculum vitae is attached at appendix B to this report.

² BARA’s application was submitted to the NCC on 27 September 2011 (hereafter: ‘BARA Original Submission’) and is supplemented by two further submissions on 27 October 2011 (hereafter: ‘BARA First Supplementary Submission’) and 4 November 2011 (hereafter: ‘BARA Second Supplementary Submission’). BARA’s First Supplementary Submission is supported by a stand alone, unattributed economic analysis of whether or not it would be uneconomical for anyone to duplicate the Caltex pipeline.

³ Caltex Australia, *Submission by Caltex Australia to the National Competition Council regarding the application by BARA for declaration of services provided by jet fuel infrastructure, Service No 2: provided by the Caltex Pipeline Facility*, November 2011 (hereafter: ‘Caltex Submission’).

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- § section four sets out my economic analyses of matters arising under criterion (a), being whether or not access (or increased access) would promote a material increase in competition in one or more dependent markets;
- § section five summarises my conclusions;
- § appendix A provides a list of all of the materials and information upon which I have relied in producing my report; and
- § appendix B contains a copy of my curriculum vitae.

In preparing this report I have been assisted by two Sydney-based colleagues, Hayden Green⁴ and Luke Wainscoat⁵ – Senior Consultant and Consultant, respectively. Notwithstanding this assistance, the opinions in this report are my own and I take full responsibility for them.

I confirm that I have read the Guidelines for Expert Witnesses in Proceedings of the Federal Court of Australia and that I have made all inquiries that I believe are desirable, and that no matters of significance that I regard as relevant have, to the best of my knowledge, been withheld.



Gregory John Houston

29 November 2011

⁴ Hayden holds a Bachelor of Commerce with First Class Honours in economics and a Bachelor of Laws with Honours from the University of Auckland, New Zealand.

⁵ Luke holds a PhD in Economics and a Master of Commerce in Economics from the University of Melbourne and a Bachelor of Science in Economics from the University of Warwick in the United Kingdom.

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2. Background

This section begins by describing the pipeline owned by Caltex that transports jet fuel to Sydney airport. It then explains the wider supply chain by which jet fuel is moved from refining or import facilities located in the greater Sydney area to the storage and distribution infrastructure at the airport, and then into aircraft.

2.1. Caltex pipeline

The Caltex pipeline runs for a distance of approximately 17km from Caltex’s oil refinery situated at Kurnell in southern Sydney, to the JUHI fuel facility at Sydney airport.⁶ It has a diameter that varies along the length of the pipeline from 150mm nominal bore (nb) to 300mm nb.⁷

Between the Kurnell refinery and the Sydney JUHI, the Caltex pipeline interconnects with a pipeline lateral linked to a facility for the storage and handling of jet fuel owned by Vopak Terminal Sydney Pty Ltd (the Vopak terminal).⁸ The Vopak terminal is located near the bulk liquids berth at Port Botany (owned by the Sydney Ports Corporation), which is used to receive imports of jet fuel and other petroleum and chemical products.⁹ The Caltex pipeline also interconnects with a facility used for the storage and trucking of jet fuel owned by Caltex at Banksmeadow,¹⁰ as well as a pipeline lateral linked to a separate fuel storage terminal jointly owned by Mobil and BP (the Mobil/BP terminal), which is also located in the vicinity of Port Botany.¹¹

The Caltex pipeline is currently used to provide the service of transporting jet fuel from both the Kurnell refinery and the Vopak terminal to the Sydney JUHI.¹²

BARA’s application seeks declaration of the service provided by that section of the Caltex pipeline with a diameter of around 200mm nb which runs over approximately 10km, from the point of interconnection with the Vopak terminal to the Sydney JUHI.¹³ The application includes the services provided by the filters, straining and other equipment necessary for the operation of that part of the pipeline.¹⁴ I understand that BARA’s application is not concerned

⁶ Caltex Submission, paras.94-97.

⁷ *Ibid*, paras.94-97.

⁸ *Ibid*, para.97.

⁹ *Ibid*, para.66.

¹⁰ Jet fuel can be pumped from the Caltex pipeline to the Banksmeadow terminal but is not able to be transferred from the Banksmeadow terminal to the Caltex pipeline.

¹¹ Caltex Submission, para.97.

¹² *Ibid*, para.99.

¹³ *Ibid*, para.98.

¹⁴ BARA Second Supplementary Submission, p. 1.

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with that part of the Caltex pipeline that runs from the Kurnell refinery to the point of interconnection with the Vopak terminal.¹⁵

2.2. Jet fuel supply chain

Those elements of the jet fuel supply chain of most relevance to the economic issues raised by BARA’s application commence with the refining of crude oil into various petroleum products, including jet fuel. There are seven major oil refineries operating in Australia, including two in the greater Sydney region located at Kurnell and Clyde (owned by Shell).¹⁶ Because Australia’s domestic refining capacity is insufficient to meet total demand, jet fuel is also imported from refineries in southeast Asia – typically from Singapore.¹⁷ Shell has announced that its Clyde refinery will close by mid-2013, and as highlighted by BARA, this will increase the extent of future reliance on imports of jet fuel.¹⁸

Jet fuel for use at Sydney airport (as well as other NSW and ACT airports as far away as Canberra and Newcastle) is currently sourced from either the Kurnell or Clyde refineries,¹⁹ with the balance of demand being made up from imports.²⁰ Port facilities located in the Sydney area that are capable of accepting significant deliveries of jet fuel include the bulk liquids berth at Port Botany, a Shell-owned facility at Gore Bay in Port Jackson, as well as the Kurnell refinery itself.²¹

Once jet fuel is discharged from a ship, it is transported by pipeline to nearby storage facilities, such as those at the Vopak terminal and the Mobil/BP facility.²² Terminals Pty Ltd (TPL) also owns a separate fuel storage terminal at Port Botany (the TPL terminal) that is currently used to store a range of products including flammable and combustible liquids, but not jet fuel.²³ However, I understand that it may be possible to construct additional storage tanks to allow jet fuel to be stored at this facility.²⁴

¹⁵ The BARA Original Submission states that the minimum bundle of assets that must be declared to provide the service is the ‘entirety of the Caltex pipeline’. This is defined in that submission as ‘the pipeline...which transports jet fuel from Caltex’s Kurnell Refinery...to the Sydney JUHI.’ This gives the impression that declaration of the service provided by the whole of the Caltex pipeline is sought. However in the BARA Second Supplementary Submission, BARA states that the application ‘...is restricted to the service provided by that part of the Caltex Pipeline from its interconnection with the Vopak storage facility, to and including its interconnection with the JUHI’. Thus, I assume that declaration is not sought for that part of the pipeline that connects the Kurnell refinery to the interconnection with the Vopak terminal.

¹⁶ Australian Competition and Consumer Commission, *Monitoring of the Australian petroleum industry: Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia*, December 2008, pp.9-11.

¹⁷ BARA Original Submission, p.1.

¹⁸ BARA Original Submission, p.1.

¹⁹ Caltex Submission, para.75.

²⁰ Some of these imports may be from interstate as well as from overseas.

²¹ Caltex Submission, para.66.

²² I understand from Caltex that the Mobil/BP terminal is not currently being used to store petroleum products but that jet fuel could be stored there. See paras. 70-72 and 93 of the Caltex Submission.

²³ Caltex Submission, para.73.

²⁴ *Ibid*, para.74.

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Domestically produced jet fuel is stored at the Clyde and Kurnell refineries.²⁵ From these storage facilities jet fuel is currently transported to the Sydney JUHI, either by one of two pipelines or by truck, ie:

- § the two pipelines are the Caltex pipeline described above, and a pipeline owned by Shell which has a diameter of approximately 200mm nb and runs for 32km from the Clyde refinery to the Sydney JUHI (the Shell pipeline);²⁶ and
- § BP currently trucks jet fuel from the Vopak terminal to the Sydney JUHI (as does Caltex at other airports in Australia), using facilities in which it has invested.²⁷

The Sydney JUHI is jointly owned by Shell, BP, Mobil, Caltex and Qantas.²⁸ It is used both to store jet fuel and distribute it throughout the airport to hydrant facilities located on aircraft aprons.²⁹ At aircraft aprons, jet fuel is pumped into planes via vehicles that connect a JUHI hydrant to the plane.³⁰ On those aircraft stands where no hydrant is available, jet fuel can also be transferred to planes through specialised tankers that are not connected to a JUHI hydrant.³¹ The process of transferring jet fuel onto aircraft from the JUHI infrastructure is known as an ‘into plane’ service.³² Three firms currently provide into plane services at Sydney airport, being AFS (a joint venture between Caltex, BP, Mobil and Qantas) as well as subsidiaries of both Shell and BP.³³

Jet fuel to be supplied into planes is purchased by airlines from refiners and/or importers as well as resellers that have acquired fuel from one of those parties. Airlines typically enter into term contracts for this service, often as a result of international tenders where sellers compete to supply jet fuel to a large number of airports for a period.³⁴ Finally, jet fuel is used by the airlines to transport passengers and freight from Sydney airport to numerous domestic and international destinations.

Figure 2.1 below depicts the various different functions involved in the supply of jet fuel to Sydney airport, identifying the current major participants at each functional level. I also identify those firms that could potentially undertake each activity using existing infrastructure.

²⁵ Caltex Submission, para.70.

²⁶ Sydney Jet Fuel Infrastructure Working Group, Final Report – Infrastructure for the provision of jet fuel at Sydney airport for the period to 2029, 30 April 2010 (hereafter: ‘SJFIWG Report’), p.22 and Caltex Submission, para.78.

²⁷ Caltex Submission, para.82. The Qantas submission to the NCC also explains that ‘BP has a truck loading facility available at Vopak’, see: Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011, p.5.

²⁸ Caltex Submission, para.84.

²⁹ *Ibid*, paras.83-84.

³⁰ *Ibid*, paras.83-84.

³¹ *Ibid*, paras.83-84.

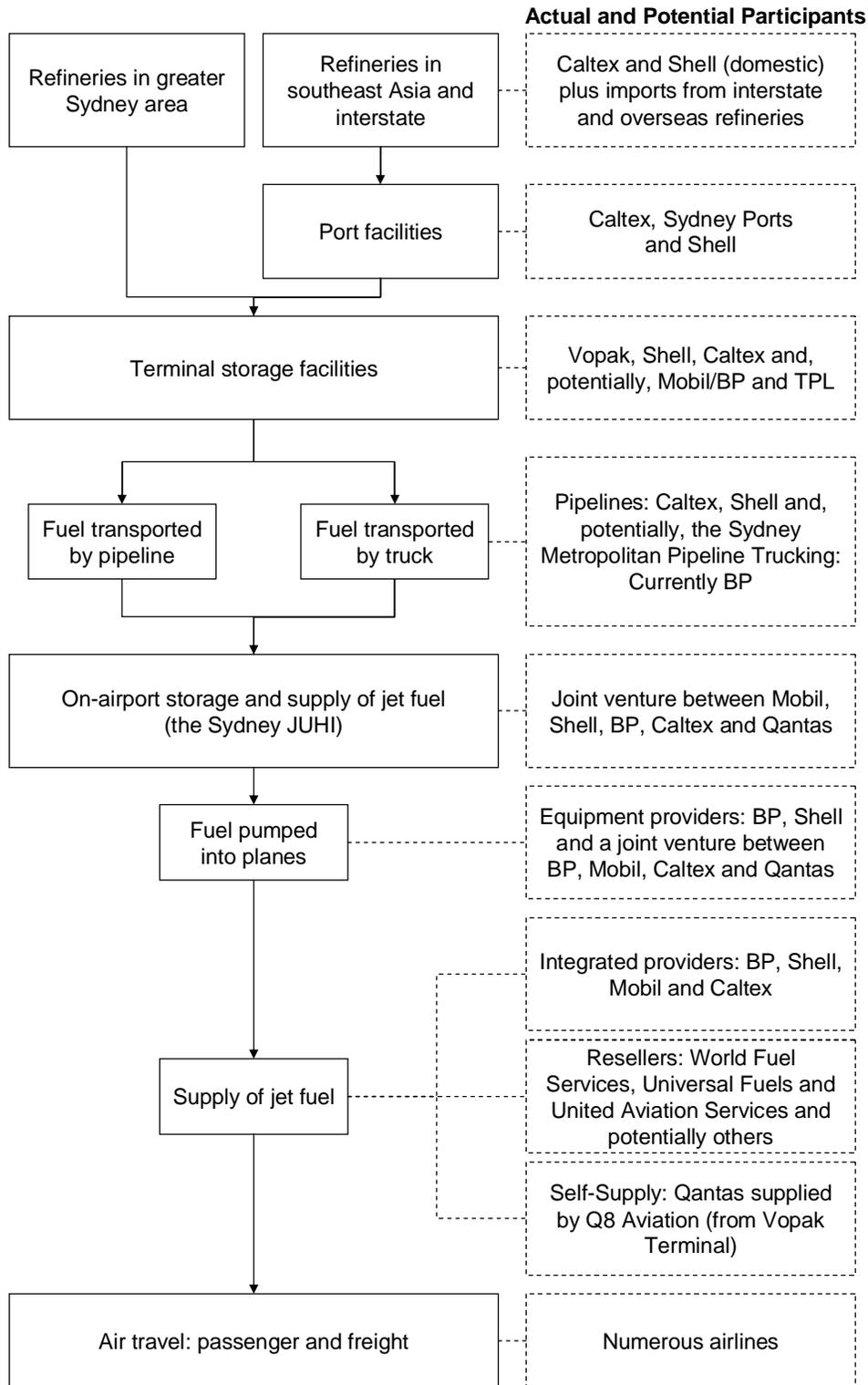
³² *Ibid*, paras.83-84.

³³ *Ibid*, para.87.

³⁴ *Ibid*, paras.170-171.

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Figure 2.1
Supply chain for Jet fuel at Sydney airport



Source: Caltex submission, paras.50-130.

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3. Is the Caltex Pipeline Uneconomic to Duplicate?

This section sets out my analysis of the economic considerations arising under criterion (b), which concerns whether or not the facility by which the service is provided – in this case the Caltex pipeline – is uneconomic to duplicate. It is convenient to consider these matters before turning to criterion (a), since whether or not it is economical to provide the service by means of one or more other facilities is a logical precursor to the analysis of the effect on competition of access to the Caltex pipeline.

3.1. Interpretation of criterion (b)

Criterion (b) of section 44G of Part IIIA of the CCA requires that the Council cannot recommend that a service be declared unless it is satisfied that:

‘[I]t would be uneconomical for anyone to develop another facility to provide the service’.

The appropriate interpretation of this criterion is currently the subject of some uncertainty and so I set out below a brief overview of the various alternative potential interpretations of the criterion. In the recent matter of Fortescue Metals Group Limited³⁵ (*Fortescue*) three alternative meanings of the term ‘uneconomical for anyone’ were posited and considered. Those competing interpretations were that the criterion is satisfied if:

- § the total net costs (including social costs) exceed the total net benefits including social benefits of developing another facility (the ‘net social benefit test’);
- § a single facility can meet demand at less total cost than two or more facilities (a ‘natural monopoly test’); or
- § it would not be profitable for anyone to develop another facility to provide the service (the ‘privately profitable test’).

Prior to *Fortescue*, the practice of both the NCC and the Australian Competition Tribunal (‘the Tribunal’) had been to adopt the ‘net social benefit test’, in which the total costs and benefits to society as a whole of constructing another facility were taken into account.³⁶ Implicit in this social cost benefit calculus was a consideration of whether the facility exhibited natural monopoly characteristics. For example, in *Duke Eastern*, the Tribunal stated that:³⁷

‘[I]f a single [facility] can meet market demand at less cost (after taking into account productive allocative and dynamic effects) than two or more [facilities], it would be “uneconomic”, in terms of criterion (b), to develop another [facility] to provide the same services.’

³⁵ *Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010), para.815.

³⁶ See for example: *Re Sydney International Airport* [2000] ACompT 1 (1 March 2000).

³⁷ *Re Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2, para.64.

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It concluded that the:³⁸

‘[T]est is whether for a likely range of reasonably foreseeable demand for the services provided by means of the [facility], it would be more efficient, in terms of costs and benefits to the community as a whole, for one [facility] to provide those services rather than more than one.’

However, the social benefit test differs from the natural monopoly test in one important respect. Specifically, the latter asks whether, for a likely range of reasonably foreseeable demand for the service, it would be more cost efficient for one facility to provide those services rather than two or more, *without* taking into account any broader social costs and benefits.³⁹ It focuses simply upon the production cost function for the service in question and does not consider factors such as positive and negative externalities.

The Tribunal in *Fortescue* felt that broader social costs were more appropriately considered under criterion (f) and, in a departure from previous decisions, it favoured a natural monopoly test for criterion (b). However, the full bench of the Federal Court took a different view on appeal. It interpreted the criterion as requiring a private profitability test.⁴⁰ It considered that if it was profitable to develop another facility to provide the service, criterion (b) would not be met, regardless of whether the facility was a natural monopoly. Under some conditions the natural monopoly test may be satisfied whilst the private profitability test is not, eg:

- § it may be more cost effective to serve current and existing demand using one facility rather than two or more (ie, a facility may be a natural monopoly); but
- § if a party seeking access could build another facility and, as a result, serve a highly profitable downstream market, that investment may be privately profitable (or, ‘economic’) despite it giving rise to inefficient cost duplication.

That decision is itself to be reviewed by the High Court and so the appropriate interpretation of criterion (b) remains subject to uncertainty. However, my analysis suggests that the economic distinction between these various interpretations of criterion (b) have no bearing on the conclusion when they are each applied to the circumstances of the current application. Under any reasonable interpretation of the service, the Caltex pipeline is not a natural monopoly, it is privately profitable to duplicate (and in fact already has been duplicated) and the total costs of developing another facility would not exceed the total benefits. I set out my analysis below, beginning with the appropriate interpretation of the relevant service.

3.2. The relevant service

My understanding of the declaration criteria is that the service definition process has two basic purposes. First, to assess whether or not it would be uneconomic to develop another facility, it is important to define the nature of the service that would need to be met by way of any alternative facility. Second, criterion (a) requires an assessment of the effect of access on

³⁸ *Re Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2, para 137.

³⁹ Put another way, if the costs incurred in the ownership and operation of a single facility to serve current and reasonably anticipated demand are declining as demand increases over the relevant range, then the facility is a natural monopoly.

⁴⁰ *Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal* [2011] FCAFC 58 (4 May 2011).

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competition in a market other than the market for the service. In order to define such a dependent market, it is helpful to establish the boundaries of the market for the service itself.

In my opinion, the most helpful way to address both these matters is to consider the nature of the demand for the service. The stated purpose of BARA's application is to enhance its members 'ability to source jet fuel [at Sydney airport] from existing and new suppliers...on fair and reasonable terms.'⁴¹ It follows that demand for the service provided by the Caltex pipeline arises from a desire by incumbent or new suppliers of jet fuel to increase their ability to transport that product to Sydney airport.

Importantly, the demand for the service of transporting jet fuel from a relevant point of origin to Sydney airport does not have to be satisfied by using the Caltex pipeline. Rather, a potential importer of jet fuel can be expected to be indifferent to the various ways that its product can be delivered to the Sydney JUHI, save for questions of relative capacity, cost and reliability. Indeed, an incumbent importer seeking to expand or a potential new entrant simply requires there to be a suitable bulk liquids berth, accessible terminal storage facilities and a means of transporting the jet fuel from the storage facility to the JUHI. Moreover, a reseller need not concern itself with these factors at all.

It follows that the service should properly be defined as the transport of jet fuel from any suitable import storage terminal facility or refinery to the Sydney JUHI. A service definition along these lines would incorporate the importation of jet fuel and its transport by means other than the Caltex pipeline, including by road tankers and the Shell pipeline. Increased use of these alternative transport services would clearly *reduce* the demand for use of the Caltex pipeline. These alternatives are close functional substitutes and so the definition of the service provided by the facility should reflect this.

In contrast, BARA's definition of the service⁴² excludes these alternatives. For example, it excludes the Shell pipeline because it 'does not provide a viable alternative for an importer of jet fuel other than Shell.'⁴³ In my opinion, this inappropriately conflates the inquiry as to whether it may be economic for one or more other facilities to be developed to provide the same or similar service with the separate question as to the identity of the owner and/or users of any such alternative facility. There is no economic reason for the second question to have any bearing on the first.

As a matter of principle, the question as to whether or not the facility is economic to duplicate involves an inquiry into the nature of the service that is being provided by the facility, its cost characteristics given market demand and whether or not alternative facilities have been or could be developed by *anyone else* to provide that service. Such a process does not contemplate any qualification as to the identity of that other party.

For the reasons I set out above, such an inquiry indicates that the relevant service should be defined more broadly than that provided by means of the Caltex pipeline alone.

⁴¹ BARA Original Submission, p.9.

⁴² BARA Original Submission, p 9.

⁴³ BARA Original Submission, p.21.

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3.3. Application of criterion (b)

In this section I assess whether it is uneconomic to duplicate the Caltex pipeline in order to provide the service (ie, the transport of jet fuel from any suitable import storage terminal facility or refinery to the Sydney JUHI), under the various interpretations of criterion (b). I begin by highlighting the fact that the Caltex pipeline does not exhibit natural monopoly characteristics before then describing a number of alternative means of transporting jet fuel to the Sydney JUHI.

3.3.1. The Caltex pipeline is not a natural monopoly

Part IIIA of the CCA was intended to apply to ‘essential facilities’ that exhibit natural monopoly characteristics. The Hilmer report, which led to the enactment of Part IIIA, began its discussion of access to essential facilities with the following statement:⁴⁴

‘In some markets the introduction of effective competition requires competitors to have access to facilities which exhibit natural monopoly characteristics, and hence cannot be duplicated economically.’

Declaring a facility that did *not* exhibit natural monopoly characteristics would be unprecedented. This statement holds regardless of the precise interpretation of criterion (b), ie:

- § although a social benefit test incorporates broader social costs and benefits (such as externalities), as noted above, implicit in this calculus is a consideration of whether the facility exhibited natural monopoly characteristics; and
- § application of a private profitability test may simply mean that criterion (b) is not met even if a facility is a natural monopoly, eg, because downstream rents make the investment worthwhile for an access seeker despite the cost duplication.

If the Caltex pipeline does not exhibit natural monopoly characteristics, criterion (b) would not be met under either the private profitability test or the natural monopoly test. Criterion (b) would also not be met under the net social benefit test unless there is some other social benefit to having one facility that outweighs the potential cost of there being a monopoly. Whether or not the Caltex pipeline is a natural monopoly provider of the service is therefore a critical consideration. Ordinarily, this would require an assessment as to whether it would be more cost effective for the Caltex pipeline to serve all of the reasonably foreseeable demand for jet fuel at Sydney airport than for two or more suppliers to serve that demand. However, in this instance the analysis is more straightforward.

There is no need to give any consideration to whether the Caltex pipeline alone could serve forecast demand over the relevant period at lowest total cost for the simple reason that it *cannot* supply that quantity of jet fuel, ie:

⁴⁴ Hilmer Committee, *National Competition Policy Review*, August 1993, p.239.

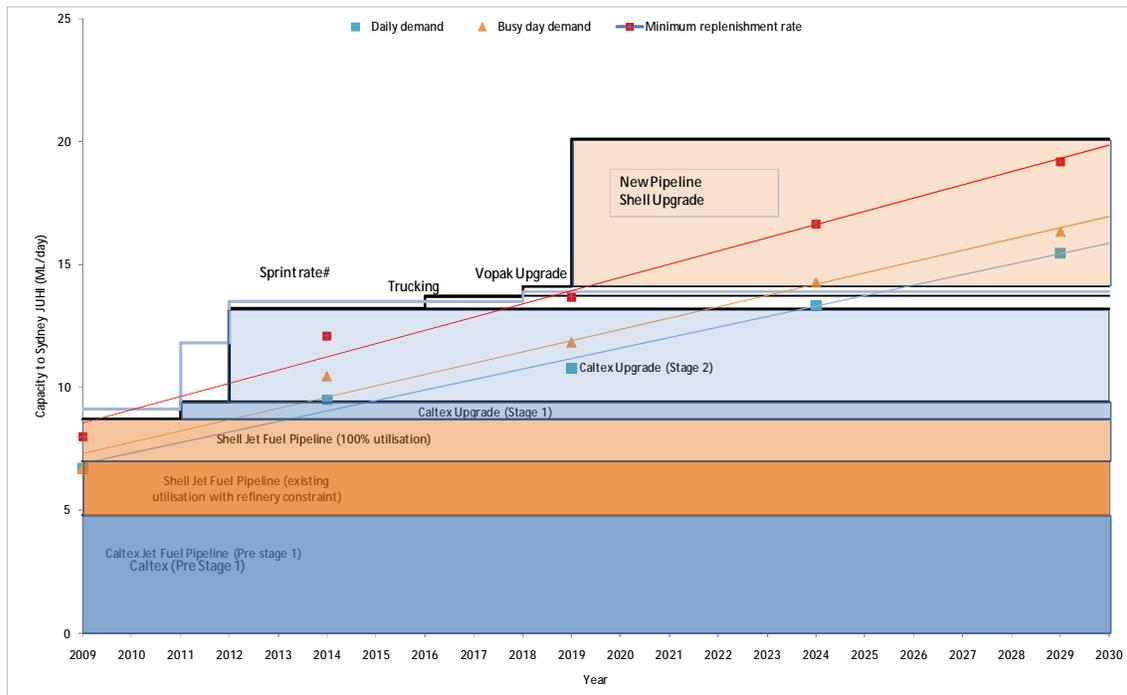
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§ by mid 2012, the nameplate capacity of the pipeline will be 9.6 megalitres (ML) per day although, in practice, the maximum achievable average daily throughput is likely to be somewhat less, at around 9.3ML per day;⁴⁵ whereas

§ the demand for jet fuel to be transported to Sydney JUHI is increasing over time and is expected to be around 9.5ML per day on an average day, or 10.5ML per day on a busy day by 2014.⁴⁶

The Caltex pipeline will therefore be incapable of satisfying demand for the transport of jet fuel to the Sydney JUHI on an average day by 2014. Furthermore, by around 2018/2019, the Caltex pipeline and the Shell pipeline combined will not be able to meet the target for the capacity to transport jet fuel (the minimum replenishment rate) to the Sydney JUHI given in the SJFIWG report.⁴⁷ Both these points are illustrated by Figure 3.1 below, in which the volume of jet fuel currently trucked by BP is excluded (since I do not have this information), and the magnitude and timing of investments are based on the estimates in the Caltex submission.

Figure 3.1
Caltex pipeline capacity versus forecast total demand for jet fuel⁴⁸



Source: Caltex data.

⁴⁵ Caltex Submission, p.21.

⁴⁶ SJFIWG Report, Table 5.

⁴⁷ SJFIWG Report, pp.35-36.

⁴⁸ The ‘Sprint rate’ is the theoretical maximum capability of the available infrastructure. For example, prior to the Caltex Stage 2 upgrade, the sprint rate would be the sum of 7.9ML per day (using Vopak’s pumps) and 3.9ML per day (being the maximum capacity of the Shell pipeline).

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Plainly, the Caltex pipeline cannot be a natural monopoly over the relevant range of output if it is not capable of being a sole supplier – the defining characteristic of a monopoly. By contrast, if it was the case that the pipeline had sufficient capacity to serve all demand for jet fuel at the airport over the period for which declaration is sought, it may then constitute a natural monopoly. However, the present circumstances are quite different; not only is it economic to duplicate the Caltex pipeline, but also it is *necessary*. The clearest manifestation of this is the fact that it *has already* been duplicated – not only by the Shell pipeline but, as I explain in section 3.3.2.2, by trucking.

The critical difference between my analysis and that set out in the BARA Original Submission is that BARA contends that the demand for the service is the demand for the transport of jet fuel through the Caltex pipeline to the Sydney JUHI, ie, a subset of the total demand for the transport of jet fuel to the Sydney JUHI. For the reasons I set out in section 3.2. I disagree with this approach. Indeed, if it was permissible to ‘net off’ demand served by other providers in applying criterion (b), almost any facility could be wrongly classified as a natural monopoly that was uneconomic to duplicate, which cannot be correct.

Since the Caltex pipeline is not a natural monopoly, in my opinion criterion (b) is not satisfied. This conclusion holds regardless of whether the natural monopoly, social benefit or private profitability test is applied. Moreover, it is reinforced by the consideration of the alternative means of delivering jet fuel to the Sydney JUHI, many of which appear to involve similar costs to those associated with transport via the Caltex pipeline.

3.3.2. Alternatives to the Caltex pipeline exist

In this section I describe the current and potential future alternatives to using the Caltex pipeline to transport jet fuel from suitable import storage terminal facilities or refineries to the Sydney JUHI. The existence of current alternatives and the likelihood that more will be developed demonstrates that, however the service is defined, the Caltex pipeline has been economically duplicated and will be further duplicated in the future.

3.3.2.1. Shell pipeline

Shell owns and operates a pipeline that transports jet fuel refined at its facility at Clyde to the Sydney JUHI. This pipeline is currently used to supply an average of approximately 2.2 ML of jet fuel per day from the Clyde refinery to the Sydney JUHI.⁴⁹ That level represents 56 per cent of the available pipeline capacity, although I understand that, at present, there are limits on the extent to which Shell can supply more jet fuel using that pipeline and its other existing infrastructure, ie:⁵⁰

§ the pipeline from Shell’s Clyde refinery to Sydney JUHI is underutilised because the Clyde refinery’s jet fuel production output is less than the pipeline’s capacity; and

⁴⁹ SJFIWG Report, p.39.

⁵⁰ Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011, p.4.

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§ importing jet fuel through Shell’s Gore Bay facility is not an attractive option, since the pipeline running from Gore Bay to the Clyde refinery presently transports crude oil and finished products and there would consequently be a high risk of product contamination.

However, in July 2011 Shell announced that it will be converting the Clyde refinery to a fuel terminal for the storage and distribution of refined products, and would no longer be importing crude oil. This will enable the Shell pipeline to be better utilised and offer greater capability for jet fuel supply from around July 2013.⁵¹ Specifically, I understand that:

§ Shell will be in a position to import jet fuel to its Gore Bay storage facility and transport up to 3.9 ML of jet fuel per day to the Sydney JUHI; and

§ by 2014 this capacity will represent around 32 per cent of the required replenishment rate for jet fuel at the Sydney JUHI.⁵²

Moreover, because the Shell pipeline has similar physical attributes to the Caltex pipeline which is currently being expanded, it seems possible that the Shell pipeline could similarly be expanded by upgrading the pumps and infrastructure. Presumably this would involve costs of a similar magnitude to those currently being incurred by Caltex. In my opinion, it clearly is economic to duplicate the Caltex pipeline; indeed, it *has been* duplicated by the Shell pipeline.

3.3.2.2. Trucking

BP regularly transports jet fuel to Sydney airport in road tankers from a dedicated facility at the Vopak terminal.⁵³ Caltex also uses trucks to transport jet fuel to other major airports in Australia where it does not have pipeline infrastructure, including over distances far greater than the 10km between the Vopak terminal and the Sydney JUHI.⁵⁴ For example, Caltex currently transports around [CIC] of jet fuel per month a distance of around 33km to Melbourne airport, at a cost of approximately [CIC]. In other words, trucking is *already* an economically viable transportation option at other airports in Australia.

I understand that the capacity of the Sydney JUHI to receive shipments by trucks could be further enhanced by the installation of a new bridger facility⁵⁵ and that this would cost approximately \$460,000.⁵⁶ The SJFIWG Report found that such an investment would allow approximately 0.5ML of jet fuel per day to be transported by truck to the Sydney JUHI.⁵⁷ If this investment was undertaken by BP, no further outlays would be required, since it already

⁵¹ Shell website, accessed on 23 November 2011: [http://www.shell.com.au/home/content/aus/aboutshell/media centre/news and media releases/2011/clyde cease refi ning_27072011.html](http://www.shell.com.au/home/content/aus/aboutshell/media%20centre/news%20and%20media%20releases/2011/clyde%20cease%20refining_27072011.html).

⁵² The required minimum replenishment rate of 12.1ML per day is given by the SJFIWG Report, p.36.

⁵³ See: Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011, p.5 and Caltex Submission, p.93.

⁵⁴ Caltex Submission, para.82.

⁵⁵ A new bridger facility is a permanent installation of a facility at the on-airport storage facility that would allow the receipt of jet fuel via trucking, see: SJFIWG Report, p.39.

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*, p.40.

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has the requisite infrastructure at the Vopak terminal. Such an investment appears to be economic since:

- § the ongoing cost of providing trucking at Sydney airport would be unlikely to exceed the [CIC] that it costs Caltex to truck jet fuel to Melbourne airport, given the shorter distance to the Sydney JUHI;⁵⁸
- § the one off cost of the new bridger facility at the JUHI is equivalent to a cost of 0.05c/l if it is assumed that:
 - the new facility costs \$460,000;
 - 0.5ML of jet fuel is transported per day; and
 - the cost of the new bridger facility is spread evenly over five years (though I expect such a facility would be of use for more than five years);
- § therefore the assumed upper bound of the cost of transporting 0.5ML of jet fuel per day from the Vopak terminal to the Sydney JUHI by truck, including the upfront cost, will be [CIC]; and
- § this is comparable to third party prices to use the Caltex pipeline which are [CIC].

I also understand that jet fuel could also be transported by road tanker from a number of other terminals to the Sydney JUHI, including the TPL terminal and the Mobil/BP terminal. In each instance, this would require additional investment to be undertaken at the relevant terminal (the BP infrastructure is already *in situ* at the Vopak terminal). Although I do not have any data on those bespoke capital requirements, those outlays would need to be considerable in order to render trucking uneconomic, given the margin implied by the above example.

For this reason, trucking represents a further way in which the Caltex pipeline could be (and has been) economically duplicated. Indeed, it is possible that there will be a significant increase in the amount of trucking in the near to medium term.

3.3.2.3. A new pipeline

The material I present above establishes that there are already economically viable alternatives to the Caltex pipeline, and that at least one of those alternatives is likely to become increasingly attractive in the relatively near term, following the closure of Shell's Clyde refinery. However, even if those alternatives did not exist and Caltex refused access to its pipeline on commercial terms (a circumstance that I understand has not been the case in the past, and is not intended to be the case in relation to the forthcoming expanded capacity),⁵⁹ it is nevertheless still likely to be economic to duplicate the facility by constructing a new pipeline.

I understand that there are a number of options for the construction of a new pipeline to transport jet fuel to the Sydney JUHI. For example, a new pipeline from one of the Port

⁵⁸ Caltex Submission, para.124.

⁵⁹ *Ibid*, paras.99-101 and 115.

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Botany terminals to the Sydney JUHI could be less than 10km long.⁶⁰ Moreover, because such a pipeline would run over public land, it is reasonable to presume that an interested party could obtain the requisite planning and other consents.⁶¹ BARA has estimated that it would take five years to build a new pipeline and it would cost between \$50m and \$60m.⁶² I understand from Caltex that the construction period may be somewhat faster,⁶³ but have nonetheless adopted the BARA estimates as a baseline.

The relevant question for any party contemplating the construction of a new pipeline is whether it could be expected to recover its costs, including a return on capital, over the lifetime of the pipeline – a period of approximately 40-50 years.⁶⁴ Even under very conservative assumptions, there seems little doubt that it would be able to do so. For example, adopting the following assumptions regarding a new pipeline:

- § the capacity of the new pipeline is 10ML per day (consistent with BARA’s assumption);⁶⁵
- § that the pipeline earns no revenue in the first three years (adopting BARA’s contention that there would be short-run marginal cost pricing⁶⁶ between 2017 and 2020 due to the creation of excess capacity);⁶⁷
- § the new pipeline has a useful life of 40 years and an average utilisation of only 50 per cent;⁶⁸ and

⁶⁰ *Ibid*, para.12.

⁶¹ *Ibid*, paras.300-310.

⁶² BARA Original Submission, pp.27 and 30.

⁶³ Caltex Submission, paras.266-269.

⁶⁴ *Ibid*, para.34.

⁶⁵ BARA First Supplementary Submission, p.2. In practice, it is perhaps more realistic to expect an entrant to build a pipeline with pumping facilities and other infrastructure capable of delivering, say, 5ML per day initially. That pumping could subsequently be upgraded over time as demand increases, increasing the capacity of the pipeline to 10ML per day. This is the approach that has been taken by Caltex.

⁶⁶ I have assumed for the sake of simplicity that the short-run marginal cost of operating the pipeline would be zero (hence the zero revenue assumption). Of course, in practice there would be marginal costs associated with supplying jet fuel that would need to be recovered during this period.

⁶⁷ BARA First Supplementary Submission, pp.3-6. For the reasons set out in section 4.3.3 I do not find that contention to be credible. Nonetheless, I have adopted it here since, even with this unrealistic assumption, it is evident that it would be economic to construct a new pipeline.

⁶⁸ This is a very conservative assumption. For example, suppose that:

- § the total annual demand for jet fuel Sydney airport is 3,926ML in 2019 and 4,864ML in 2024 (Table 3, Caltex submission);
- § the achievable utilisation of the Caltex pipeline is 9.3ML per day (Table 2, Caltex Submission);
- § the total capacity of the Shell pipeline is 3.9ML per day;
- § the total capacity of the new pipeline is 10ML per day; and
- § there is no trucking of jet fuel.

If the utilisation rate was equivalent across the three pipelines, total demand would be served with an average utilisation rate of 47.5 per cent in 2019 and 58.9 per cent in 2024. This utilisation rate would then be likely to increase significantly over time as the expected demand for jet fuel at Sydney airport increases so that the average utilisation rate over the life of the pipeline is likely to be significantly higher than 50 per cent.

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§ an indicated price of [CIC].

Under this set of very conservative assumptions, the pipeline owner could expect to receive [CIC].⁶⁹ Given that the marginal costs of operating the pipeline can be expected to be relatively modest, it seems very likely that the construction of a new pipeline would be profitable if viable alternatives did not already exist and Caltex was also to refuse access to its pipeline on commercial terms. Moreover, I explain in section 4.3.3.1 that the airlines would seem to be well placed to either construct such a pipeline themselves, or underwrite a new entrant by means of a long-term contract.

In addition to building a new pipeline, it may be possible to use existing pipelines to transport jet fuel to the Sydney JUHI that are currently used for other purposes. For example, the SJFIWG report considered the possibility that an existing link from the Sydney Metropolitan Pipeline could be used to divert jet fuel to the Clyde refinery.⁷⁰ From there it could be transferred to the Sydney JUHI by using the Shell pipeline. However the SJFIWG report found that any jet fuel scheduled to Clyde via the Sydney Metropolitan Pipeline will displace the carriage of other products and be subject to pipeline availability. For those reasons, and given the attractiveness of the alternatives given above, I consider this option to be less likely than the alternatives I have described above, and hence do not consider it any further.

3.4. Summary

A distinguishing characteristic of the Caltex pipeline is that it represents a facility that cannot serve the projected demand for the service in question; namely, demand for transportation of jet fuel from suitable storage facilities or refineries to the Sydney JUHI. It follows that it must be economic to duplicate the Caltex pipeline under any interpretation of criterion (b). Indeed, the facility *must* be duplicated and has already been so, ie:

- § the Shell pipeline transports jet fuel to the Sydney JUHI and will have an increased capacity to do so from mid 2013 following the closure of the Clyde refinery; and
- § trucks are also used to transport jet fuel to the Sydney JUHI and could be used more extensively in the future for only modest additional investment.

Even if these facilities were not available and Caltex was also to refuse access to its pipeline on commercial terms, it is still likely to be economic to duplicate the facility by constructing a new pipeline. Airlines would be one of many potential candidates to undertake or sponsor such an investment.

In short, the Caltex pipeline does not provide an essential service and can and has been economically duplicated. For these reasons, in my opinion criterion (b) is not met. Moreover, the fact that access to the service does not represent an impediment to competition in any related market has substantial bearing on the assessment of criterion (a), as I explain in the following section.

⁶⁹ This assumes that the pipeline does not earn any revenue until 2020 and then earns [CIC].

⁷⁰ SJFIWG Report, p.39.

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4. Would Access Promote Competition?

This section sets out my economic analyses of matters arising under criterion (a), being whether or not access (or increased access) would promote a material increase in competition in one or more dependent markets. It draws significantly upon my analysis of criterion (b).

4.1. Interpretation of criterion (a)

Criterion (a) of section 44G of Part IIIA of the CCA requires that the NCC cannot recommend that a service be declared unless it is satisfied that:

‘[A]ccess (or increased access) to the service would ‘promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the service’.

This involves a two stage process, ie:

- § the identification of the ‘market for the service’ and the extent to which there are any economically separable, dependent markets; and
- § an assessment as to whether access (or increased access) to the service would promote a material increase in competition in one or more of the dependent markets.

The subsequent step requires two states of the world to be compared: that ‘with’ access (or increased access) and that ‘without’ it. In particular, the full bench of the Federal Court has stated that the correct comparison is of:⁷¹

‘[T]he future state of competition in the dependent market with a right or ability to use the service and the future state of competition in the dependent market without any right or ability or with a restricted right or ability to use the service’.

Applying this test to the circumstances of the Caltex pipeline gives rise to the following threshold question, ie, whether:⁷²

- § the right or ability to access the service (or more of the service) provided by the Caltex pipeline would promote a material increase in competition in a dependent market; as compared with
- § the state of world in which there was no access to the service provided by the Caltex pipeline, or only a restricted right to use the service.

The Tribunal has also indicated that if the state of competition in a dependent market is *already* effectively competitive, declaration is not necessary.⁷³ Rather, the purpose of

⁷¹ *Sydney Airport Corporation Ltd v Australian Competition Tribunal and Others* (2006) 155 FCR 124, paras.83-84.

⁷² To be clear, ‘access (or increased access)’ does not mean access to the entirety of the capacity of the Caltex pipeline. Caltex itself uses the pipeline to transport jet fuel to the Sydney JUHI and will continue to do so. For this reason, when I use the term ‘access (or increased access)’, I am referring to access to that portion of the pipeline capacity that Caltex does not use and does not anticipate using in the near- to medium-term.

⁷³ See: *Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010), para.1068.

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declaration has been said by the Tribunal to be to promote competition in those markets in which rivalry is *ineffective*. In particular, the Tribunal has expressed the test as requiring a stream of rivalrous initiatives that prompt a response.⁷⁴ This involves looking for a change that will:⁷⁵

‘[F]orce sellers to outsell, or attempt to outsell, their rivals in the related market, on pain of losing market share if they do not change their competitive strategy.’

It follows that the assessment of criterion (a) should focus on the existing state of competition in a dependent market (and, particularly, whether it is already effectively competitive) and the extent to which the price and non-price dimensions of competition in that market are likely to intensify if there is access (or increased access) to the Caltex pipeline service. In the following sections I provide my assessment by reference to the two stage process described above, beginning by defining the relevant markets.

4.2. Relevant markets

I explained in section 3.2 that the relevant service is the transportation of jet fuel to the Sydney JUHI by the various available delivery mechanisms.⁷⁶ There are various stages of the jet fuel supply chain that precede and follow this transportation service. For example:

- § prior to transportation to the JUHI, jet fuel may be produced in either domestic or overseas refineries and stored in a range of import terminal storage facilities; and
- § once jet fuel has been delivered to the JUHI by means of the various transportation options that are available, it can be pumped directly into planes or first transferred into smaller trucks.

A variety of transactions take place at various points along this supply chain, some of which may result in the transfer of ownership of jet fuel between parties – not necessarily to airlines – while others do not. For example:

- § an airline may purchase jet fuel from a supplier such as Shell or Caltex that delivers the fuel into planes using its own infrastructure;
- § an airline may purchase jet fuel from a reseller, who sits between the airline and refiner marketers such as Shell and Caltex;
- § an airline might purchase jet fuel further up the supply chain, such as from a domestic terminal storage facility and arrange for self-supply to its aircraft – Qantas is one such example;⁷⁷ and

⁷⁴ *Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010), para.1062.

⁷⁵ *Ibid.*

⁷⁶ Recall that this encapsulates modes of transport in addition to the Caltex pipeline, including the Shell pipeline and trucking.

⁷⁷ Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011, p.7.

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§ it is also common practice for airlines to tender for jet fuel to be supplied at many international airports.⁷⁸

In other words, the parties who sell jet fuel for delivery to airlines ‘at the wing tip’ do so under a variety of arrangements by which they obtain both the fuel itself and the sequence of services – delivery to the JUHI, the JUHI service, and the into plane service – to deliver it. Some parties acquire both the fuel and all relevant upstream services under contract, and are known as resellers. Other parties may refine or import the fuel, and then provide directly some or all of the upstream services needed to deliver the fuel to airlines.

In my opinion, it is neither necessary nor appropriate to define separate dependent markets in relation to each of the functions upstream of the supply of jet fuel to airlines. Ultimately, the nexus of transactions and modes of delivery all represent different ways of supplying jet fuel to airlines. It is the provision of this activity that the BARA application appears primarily to be targeted.⁷⁹

For this reason, in my opinion, it is convenient to define a single dependent market for the supply of jet fuel to airlines (the dependent market), recognising that this may comprise activities that take place both upstream and downstream of the market for the service.

4.3. Assessment of competition

In the following section I assess the state of competition for the supply of jet fuel to airlines and consider whether declaration of the service provided by the Caltex jet fuel pipeline facility would promote a material increase in competition.

4.3.1. International market forces

In order to determine whether access (or increased access) to the Caltex pipeline is likely to promote a material increase in competition in the dependent market, it is helpful first to consider one of the principal determinants of prices in that market – international trade. It is a matter of common ground that domestic production of jet fuel is insufficient to meet total demand, and this will not change in the future.⁸⁰ The shortfall will need to be imported from oil refineries located throughout South-East Asia – principally Singapore.⁸¹ In other words, imports represent the ‘marginal’ source of supply to the dependent market.

⁷⁸ Caltex Submission, para.171.

⁷⁹ I note that BARA also defines a downstream market for air passenger and freight services through Sydney airport, in which it considers that competition will be promoted. I have no doubt that one or more such market(s) exists, but note that it is of no practical consequence for the assessment of matters arising under criterion (a). First, the market(s) can already be taken as effectively competitive and so, based on the position expressed by the Tribunal in Fortescue, criterion (a) has no application (see: *Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010, para.1068). Second, the route entry and expansion decisions of airlines seem unlikely to be influenced in any material way by the cost of delivering jet fuel from domestic storage facility to the Sydney JUHI. Finally, competition cannot be materially increased in such a market unless it is first increased in the market for the supply of jet fuel to airlines (the dependent market I define below), and so a separate analysis is unnecessary in any event.

⁸⁰ BARA Original Submission, p.1.

⁸¹ This fuel will be shipped in bulk liquid transport vessels and stored, including in the Vopak terminal in Port Botany.

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This has a significant bearing upon the price at which jet fuel will be supplied to that market with and without access (or increased access). In particular:

- § the price that parties pay to import jet fuel to domestic storage facilities (before additional costs are incurred to transport it to the Sydney JUHI) reflects the import parity price (IPP) for that internationally traded commodity; and
- § this in turn determines the price (before transport) of domestically refined jet fuel, ie, prices are set by reference to the costs that are incurred by importers to purchase jet fuel overseas and transport it to a storage facility in Sydney.⁸²

Given Australia's relatively modest demand for jet fuel relative to the global trade in the same product, any relevant volume of jet fuel can therefore be imported to an import terminal storage facility for a price reflecting the IPP (before additional costs are incurred to transport it to the Sydney JUHI). This will in turn determine the price of the domestic equivalent. It can therefore safely be presumed that there is effective competition for the supply of jet fuel to import terminal storage facilities.⁸³

It follows that the only way in which access (or increased access) to the Caltex pipeline can promote a material increase in competition for the supply of jet fuel to airlines is if such access is integral for the ability to compete in that dependent market. Put another way, it must be shown that the effective competition in the delivery of IPP-priced jet fuel to terminals is being undermined by the subsequent inability to obtain reasonable terms and conditions of access to the Caltex pipeline.

Specifically, in order for criterion (a) to be met, it must be demonstrated that:

- § absent access (or increased access) to that part of the Caltex pipeline that is not being used by Caltex, access seekers are unable to obtain a competitively priced alternative mode of delivery to the Sydney JUHI; and
- § access (or increased access) would force providers of jet fuel in the dependent market to improve the price and/or non-price terms and conditions offered to airlines.

Conversely, criterion (a) would *not* be met if:

- § there are multiple suppliers in that market availing themselves of various alternative, comparably priced modes of transporting jet fuel to the Sydney JUHI; and/or
- § access to the Caltex pipeline is already available (and will continue to be made available) on reasonable terms and conditions, enabling competitive prices to be offered.

In these circumstances, one could safely conclude that competition for the supply of jet fuel to airlines is already effective or, at the very least, would not be materially promoted by

⁸² See for example: Australian Competition and Consumer Commission, *Monitoring of the Australian petroleum industry: Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia*, December 2010, chapter 8.

⁸³ There are a large number of firms that can supply large quantities of jet fuel from Singapore to a Sydney port at a price reflecting IPP. There are no substantial barriers to entry to this activity, since all that is required is access to port facilities and a ship to transport the jet fuel.

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access (or increased access) to the Caltex pipeline. In my opinion, several factors suggest the circumstances of the Caltex pipeline do not meet criterion (a) for precisely these reasons, as I explain below.

4.3.2. Competition in the dependent market

The number of firms supplying a product in a market can provide useful insights into the degree of competition. In the previous section I explained that there are a significant number of businesses supplying jet fuel to airlines in the dependent market using various modes of delivery, ie:

- § there are four vertically integrated firms that sell jet fuel into aircraft at Sydney airport, ie, Caltex, Shell, BP and Mobil (albeit to a lesser extent);⁸⁴
- § there are at least three more firms who resell jet fuel to aircraft at Sydney airport after purchasing supplies from Caltex, Shell and BP;⁸⁵ and
- § Qantas achieves a certain amount of self supply at a number of points along the supply chain, including negotiating access to the JUHI, investing in a joint venture to provide into plane services, negotiating access to both the Caltex pipeline and contracting for purchases ex-Vopak's terminal.⁸⁶

Two of the firms competing with Caltex (and others) in the dependent market also do so using their own transportation infrastructure. In particular, Shell has a pipeline in direct competition with the Caltex pipeline, which will have capacity from mid-2013. BP also uses road tankers to make deliveries to the JUHI. The participation by three firms using distinct transport arrangements is potentially telling since, in other industries, the existence of two 'facilities-based' competitors has on some occasions been deemed sufficient to ensure effective competition even before consideration is given to other competitors such as resellers and firms undertaking self-supply, for example:

- § the Australian Competition and Consumer Commission (ACCC) has exempted from declaration a number of telecommunications services where there are two or more 'facilities-based' competitors to Telstra in an exchange or on a particular route;⁸⁷
- § the ACCC recently advised the government that the presence of one or more backhaul providers may be sufficient to ensure effective competition for the purposes of defining points of interconnection for the National Broadband Network;⁸⁸

⁸⁴ The BARA Original Submission states that: '[T]he Applicant understands that ExxonMobil withdrew from the [jet fuel] market in 2010'. However, in its submission to the NCC, Mobil clarifies that 'BARA's application contains numerous factually incorrect statements about Mobil and its operations, including asserting that Mobil does not market jet fuel at Sydney airport.' See: Mobil Oil Australia Pty Ltd, *Re: BARA Sydney JUHI Access Declaration Application*, November 2011.

⁸⁵ These include World Fuel Services, Universal Fuel Supplies and United Aviation Solutions.

⁸⁶ Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011, p.7. I understand that Qantas purchases jet fuel for delivery from the Vopak terminal from Q8 Aviation (Caltex Submission, para.93).

⁸⁷ See for example: Australian Competition and Consumer Commission, *Telstra's domestic transmission capacity service exemption applications: Final decision*, November 2008, p.42.

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- § the Tribunal in *Chime Communications* exempted from declaration the local carriage and wholesale line rental services being provided in those local exchanges with three or more facilities-based competitors (including Telstra);⁸⁹
- § the Tribunal in *Duke Eastern* concluded that access to the Eastern Gas Pipeline would not promote competition because a competing pipeline facility, the Moomba to Sydney Pipeline also supplied natural gas to Sydney and Canberra (and had spare capacity), as well as an interconnector;⁹⁰ and
- § the NCC itself concluded that the Moomba to Sydney Pipeline should be subject to light regulation (rather than ‘full coverage’) for similar reasons, ie, the existence of the Eastern Gas Pipeline and the interconnector.⁹¹

Although I recognise that the market for the supply of jet fuel to airlines may differ in some respects to the markets that were the subject of these decisions (with the exception of the *Duke Eastern* and Moomba to Sydney Pipeline decisions, which have many parallels), the basic proposition remains sound. Specifically, if there are multiple firms in a market supplying a product using their own infrastructure (such that they are not dependent upon access from a vertically integrated competitor), it is often the case that:

- § the incentive and ability of any one of those firms to charge a supra-competitive price to its customers is greatly reduced, and potentially eliminated; and
- § the incentive and ability of those firms to refuse access to its own infrastructure, or to set unreasonable terms and conditions of access, is greatly diminished.

For this reason alone, in my opinion it is highly unlikely that any jet fuel supplier in the dependent market would be in a position to charge a price for jet fuel that exceeded the competitive level, or to impose unreasonable non-price terms and conditions.⁹² Any supplier that attempted to do so is likely to lose business to other jet fuel suppliers – potentially firms availing themselves of a different set of supply arrangements. This conclusion derives largely from the analysis in section 3, which illustrated that the Caltex pipeline is economic to duplicate and competes with several existing alternatives.

However, even if these alternatives did not exist and Caltex refused to provide access to its pipeline to competitors on commercial terms, it would not necessarily follow that competition in the dependent market is ineffective, or would be promoted by access (or increased access). In section 3.3.2.3 I explained that it may be feasible for prospective suppliers of jet fuel to construct a new pipeline in order to compete in the dependent market. The potential for this

⁸⁸ Australian Competition and Consumer Commission, *ACCC Advice to Government, National Broadband Network Points of Interconnect, Public Version*, November 2010, p.54.

⁸⁹ *Application by Chime Communications Pty Ltd* [2008] ACompT 4 (22 December 2008).

⁹⁰ *Re Duke Eastern Gas Pipeline Pty Ltd* [2001] ACompT 2.

⁹¹ National Competition Council, *Light regulation of the Moomba to Sydney Gas Pipeline System, Final Decision and Statement of Reasons*, 19 November 2008.

⁹² I note that in its submission to the NCC, Qantas state that ‘Qantas’ experience clearly demonstrates that it is possible to access the jet fuel supply infrastructure on commercially reasonable terms’, see Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011, p.6.

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form of facility-based entry is likely to place yet further limits on the incentive and ability of suppliers in the dependent market (including Caltex) to charge prices above the competitive level.

The countervailing power of airlines should also not be underestimated. If those customers perceived that competition between the existing suppliers in the dependent market was ineffective and that prices were consequently above the competitive level, they could take the following steps:

- § build a new pipeline, or sponsor an entrant, eg, Qantas alone could guarantee sufficient demand to underwrite such an investment by way of a long-term supply contract;⁹³ and/or
- § negotiate for the delivery of jet fuel by means of the Shell pipeline or arrange for jet fuel to be trucked to the JUHL.

Moreover, because most international airlines arrange for the supply of jet fuel using tenders for supply to multiple airports around the world, airlines are likely to have greater bargaining power through the prospect of reprisals in other geographic locations if prices in Sydney exceed the level implied by effective competition. It may also be revealing that BARA has not itself sought access to the service, or pointed to any specific proposal from any party wishing to access the service. Rather, I understand that:

- § Caltex has been prepared to offer capacity to access seekers, and intends to make available additional capacity following the completion of its expansion; and
- § it is not apparent that there have been any complaints by the firms that have procured pipeline capacity from Caltex as to the terms and conditions of access.

These are potentially important considerations, since the Tribunal in *Fortescue* viewed the question of whether or not access would be taken up as ‘an essential consideration’.⁹⁴ In my opinion, it is not at all clear that access (or increased access) would in fact be taken up by any of the parties⁹⁵ identified by BARA if the Caltex pipeline is declared. Rather, the preceding analysis suggests that access (or increased access) to the pipeline would not remove an impediment that would otherwise prevent competition in the supply of jet fuel to airlines.

The above considerations suggest strongly that competition in the dependent market for supply of jet fuel to airlines is already effective and, even if it is not, that access (or increased access) to the service provided by the Caltex pipeline would not promote a material increase in competition in that market. For this reason, in my opinion, criterion (a) is not met.

⁹³ I note that this need not be by way of a ‘take-or-pay’ contract for pre-specified volumes. Indeed, an airline is likely to be reticent to make such a commitment in light of the uncertainties inherent in the routes and frequency of flights that it will operate in the future. However, a long-term contract need not commit the airline to purchasing specific quantities of jet fuel. Rather, it could simply guarantee that the airline would meet a certain proportion of its demand by means of the pipeline. For example, Qantas currently consumes 40 per cent of all the jet fuel at Sydney airport (Caltex Submission, para.37). If this was still the case in 2014, Qantas would require approximately 3.8ML of jet fuel per day (based on total annual demand for jet fuel at Sydney airport of 3,472ML, Caltex Submission, para.116). This is approximately equivalent to the capacity of the Shell pipeline.

⁹⁴ See: *Fortescue Metals Group Limited* [2010] ACompT 2 (30 June 2010), para.1064.

⁹⁵ BARA Original Submission, p.23.

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4.3.3. BARA supplementary submissions

I conclude above that competition in the dependent market for the supply of jet fuel to airlines is already effective. Two of the reasons underpinning my conclusion were that the Caltex pipeline could be economically duplicated in the event that access was refused (or offered unreasonable terms and conditions) and the significant degree of facilities-based competition offered by the Shell pipeline and trucking. In its First and Second Supplementary Submissions, BARA reaches rather different conclusions in respect of these two points. In particular, the respective submissions contend that:

- § it would not be profitable to duplicate the Caltex pipeline by constructing a new pipeline prior to 2020 – the date at which BARA claims such additional capacity is likely to be required; and
- § the existence of the Shell pipeline and, in particular, the potential implications of the closure of the Clyde refinery for the throughput of that pipeline, has no implications for BARA’s perception of the state of competition in the dependent market.

In my opinion, the analyses set out in the two submissions are deficient in a number of important respects, and consequently their respective conclusions are unsound. Both submissions also involve conspicuous inconsistencies in logic. I explain why below.

4.3.3.1. First Supplementary Submission

In its first supplementary submission, BARA explores whether it would be profitable to bring forward the construction of a new pipeline from 2020 – that date at which it claims more capacity will be needed. It concludes that a new pipeline would not be profitable prior to 2020 because, while there is excess capacity, prices can be expected to be set at short run marginal cost.

The first problem with this approach is that it gives insufficient attention to the fact that a new pipeline would have a useful life well beyond 2020 – 40 years or more. Whether or not such an investment would be profitable prior to 2020 is of limited relevance to such an investment decision. Rather, the decision can be expected to be made by reference to the anticipated cash flows that a pipeline will generate over its useful life, discounted to reflect the time value of money. The fact that the asset may be under-utilised for an initial period of time or that fixed costs are not recovered in the near-term is not fatal to the investment decision in the way that BARA implies. The relevant consideration is whether the total cost of the asset, plus a commercial return, can be recovered over its 40 to 50 year life.

The analysis I set out in section 3.3.2.3 illustrated that, even under very conservative assumptions, a commercial return could be obtained upon such an investment over this period. In other words, much of BARA’s analysis is of limited relevance, since it is directed at answering the wrong question. Put simply, entry can be expected to occur when it is profitable, not when it is *most* profitable.

A second critical deficiency is that BARA does not consider the opportunity for a new entrant to enter into long-term supply arrangements with its customers as a means of securing commitments to the use of new pipeline capacity. Airlines would be one of many potential candidates to sponsor investment in this way. If they perceived that competition between

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suppliers was ineffective and that prices were consequently above the competitive level, they could underwrite a new pipeline by agreeing to procure supply from an entrant once the investment is completed. A commitment from Qantas alone could guarantee sufficient demand to make such an investment worthwhile. For example:

- § if Caltex and Shell were setting access charges that exceeded the long run average cost of constructing a new pipeline; then
- § an entrant could contract with one or more airlines to transport all their jet fuel through a new pipeline at a price between the prevailing price and the long run average cost.

Both parties would benefit from such a commitment, since the airline customers would have access to a cheaper means of transporting jet fuel to the airport and the entrant would make a commercial return. Of course, the initial customers of the new pipeline may be concerned that the owner might offer any spare capacity at a low price after it has been constructed.

However, the new pipeline owner could commit not to do so by including a ‘most favoured nation’ clause in its contracts with the initial customers.⁹⁶ The option to use such an arrangement serves to illustrate a further shortcoming in the BARA submission; namely, the assumption that:

- § any excess capacity in the market will result in prices that reflect short-run marginal cost, ie, BARA assumes that the existence of spare pipeline capacity between 2017 and 2020 would imply marginal cost pricing; and
- § that when there are capacity constraints, Caltex will either refuse access to its pipeline or offer it at a price that exceeds the competitive level, consequently inhibiting competition in the dependent market.

In my opinion, these contentions are misplaced. In practice, it is unlikely that prices would exhibit such volatility. Rather, the arrangements identified above illustrates that the potential for new entry and the economic arrangements governing that entry (ie, underpinned by a long-term supply arrangement) is likely to constrain the extent to which prices will depart materially from the long run average cost of adding new capacity. I note that BARA offers quite a different account of the likely approach to price setting in its Second Supplementary Submission, the inconsistency in which I explain below.

4.3.3.2. Second Supplementary Submission

In the BARA Second Supplementary Submission, it contends that the existence of the Shell pipeline and the potential for its throughput to increase following the closure of the Clyde refinery has no implications for the state of competition in the dependent market. In effect, BARA suggests that Shell does not presently engage in effective price competition with Caltex and that it will not do so in the future. The basis for these contentions is unclear.

In section 3.3.2 I illustrated that the Shell pipeline is only one of a number of alternative means of transporting jet fuel to the JUHI. It faces competition not only from the Caltex

⁹⁶ These would guarantee that the pipeline will not supply other firms at a lower price than that offered to the initial customers.

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pipeline, but also from trucking and the prospect of new entry. Even if Shell chose not to compete vigorously with Caltex, a downstream customer would still be able to avail itself of all of these alternatives. In my opinion, even if Shell chose not to compete with Caltex (a suggestion that itself has no clear foundation), this means that:

- § the incentive and ability of Shell to charge a supra-competitive price to its customers is reduced if not eliminated by the existence of these alternatives; and
- § the incentive and ability of Shell to refuse access to its pipeline, or to set unreasonable terms and conditions of access, is similarly diminished.

Finally, I find it difficult to reconcile the contention in BARA’s Second Supplementary Submission that Shell and Caltex would not compete with one another over spare capacity with the contention in its First Supplementary Submission (described above) that any spare capacity brought about by new entry would result in marginal cost prices. These propositions appear to be contradictory. BARA offers no credible explanation as to why a new entrant would behave differently from Shell, or any other existing competitor.

The existence of the Shell pipeline and other potential modes of delivering jet fuel to Sydney airport are of considerable relevance to the assessment of competition in the dependent market and, in my opinion, mean that criterion (a) is not met.

4.4. Summary

In my opinion, access (or increased access) to the service provided by the Caltex pipeline facility would not promote a material increase in competition in the dependent market for the supply of jet fuel to airlines, because:

- § the service provided by means of the Caltex jet fuel pipeline is not a natural monopoly and is therefore economic to bypass;
- § there are already a significant number of competitors supplying jet fuel using alternative modes of delivery; and
- § if airline customers perceived that competition was ineffective, they are in a position to exert significant countervailing buyer power, including by investing in (or sponsoring investment in) the various alternative modes of transporting jet fuel.

Access (or increased access) to the pipeline would therefore not remove an impediment that would otherwise inhibit competition in either market. This conclusion is reinforced by the fact that:

- § Caltex has been prepared to offer capacity to access seekers, and intends to make available additional capacity following the completion of its expansion; and
- § it is not apparent that there have been any complaints by the firms that have procured pipeline capacity from Caltex as to the terms and conditions of access.

For these reasons, it is unlikely that any jet fuel supplier – including Caltex – in the dependent market would be in a position to charge airlines a price that exceeded the competitive level, or to impose unreasonable non-price terms and conditions. In my opinion,

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competition is therefore already effective and, even if it is not, access (or increased access) to the Caltex pipeline would have no material effect on the degree of rivalry in that market.

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5. Conclusion

This report has considered whether access (or increased access) to the service provided by the Caltex pipeline would promote a material increase in competition in a dependent market – criterion (a) of the CCA. However, in order to address that question I have found it convenient first to consider whether it is economic for someone to duplicate that facility – criterion (b) of the CCA. In my opinion, neither criterion is fulfilled.

Perhaps the most distinguishing characteristic of BARA’s application is that it is in relation to a pipeline that cannot serve the projected total demand for jet fuel from airlines at Sydney airport. It follows that it *must* be economic to duplicate the Caltex pipeline. Indeed, the facility *has already* been duplicated, ie:

- § the Shell pipeline transports jet fuel to the Sydney JUHI and will have an increased capacity to do so from mid 2013 following the closure of the Clyde refinery; and
- § trucks are also used to transport jet fuel to the Sydney JUHI and could be used more extensively in the future for only modest additional investment.

Moreover, even if these facilities were not available and Caltex refused to provide access to its pipeline on commercial terms (which I understand is not its intention), it is still likely to be economic to duplicate the facility by constructing a new pipeline. Airlines would be one of many potential candidates to undertake or sponsor such an investment. For this reason, in my opinion, criterion (b) is not met.

My finding in relation to criterion (b) also has a substantial bearing on my assessment of criterion (a). In particular, because the pipeline can be (and has been) economically duplicated, access (or increased access) to the facility is not required for competition to be effective in the dependent market for the supply of jet fuel to airlines. Several factors suggest strongly that competition in the dependent market *is already effective* and, even if it is not, it is unlikely that access (or increased access) to the Caltex pipeline would promote a material increase in competition in that market, because:

- § there are already a significant number of competitors supplying jet fuel using alternative modes of delivery;
- § if airline customers perceived that competition was ineffective, they are in a position to exert significant countervailing buyer power, including by investing in (or sponsoring investment in) the various alternative modes of transporting jet fuel; and
- § Caltex has been prepared to offer capacity to access seekers, and intends to make available additional capacity following the completion of its expansion.

It follows that it is unlikely that any jet fuel supplier – including Caltex – in the dependent market would be in a position to charge airlines a price that exceeded the competitive level, or to impose unreasonable non-price terms and conditions. Competition therefore appears to be already effective and, even if it is not, access (or increased access) to the Caltex pipeline would have no material effect on the degree of rivalry in that market. For these reasons, in my opinion, criterion (a) is also not met.

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Appendix A. Materials Relied Upon

Application by Chime Communications Pty Ltd [2008] ACompT 4 (22 December 2008).

Australian Competition and Consumer Commission, *Monitoring of the Australian petroleum industry: Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia*, December 2008.

Australian Competition and Consumer Commission, *Monitoring of the Australian petroleum industry: Report of the ACCC into the prices, costs and profits of unleaded petrol in Australia*, December 2010.

Australian Competition and Consumer Commission, *Telstra's domestic transmission capacity service exemption applications: Final decision*, November 2008.

Australian Competition and Consumer Commission, *ACCC Advice to Government, National Broadband Network Points of Interconnect, Public Version*, November 2010.

Board of Airline Representatives of Australia Inc, *Application for Declaration – Service No 2: provided by the Caltex Pipeline Facility*, September 2011.

Board of Airline Representatives of Australia Inc, *Re: Application for declaration of jet fuel supply infrastructure services provided by the Caltex Pipeline Facility, Sydney Airport*, November 2011.

Board of Airline Representatives of Australia Inc, *Supplementary submission in relation to Criterion (b) – uneconomic for anyone to develop another facility to provide the service*, October 2011.

Caltex Australia, *Submission by Caltex Australia to the National Competition Council regarding the application by BARA for declaration of services provided by jet fuel infrastructure, Service No 2: provided by the Caltex Pipeline Facility*, November 2011.

Fortescue Metals Group Limited [2010] ACompT 2 (30 June 2010).

Hilmer Committee, *National Competition Policy Review*, August 1993.

Mobil Oil Australia Pty Ltd, *Re: BARA Sydney JUHI Access Declaration Application*, November 2011.

National Consumer Council, *Light regulation of the Moomba to Sydney Pipeline System*, November 2008.

Pilbara Infrastructure Pty Ltd v Australian Competition Tribunal [2011] FCAFC 58 (4 May 2011).

Qantas Group, *Application for declaration of the JUHI and Caltex Pipelines: Qantas Group Submission to the National Competition Council*, November 2011.

Re Duke Eastern Gas Pipeline Pty Ltd [2001] ACompT 2.

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Re Sydney International Airport [2000] ACompT 1 (1 March 2000).

Shell website:

<http://www.shell.com.au/home/content/aus/aboutshell/media_centre/news_and_media_releases/2011/clyde_cease_refining_27072011.html>, accessed on 23 November 2011.

Sydney Airport Corporation Ltd v Australian Competition Tribunal and Others (2006) 155 FCR 124.

Sydney Jet Fuel Infrastructure Working Group, *Final Report – Infrastructure for the provision of jet fuel at Sydney airport for the period to 2029*, April 2010.

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Appendix B. Curriculum Vitae

Gregory Houston

Director

NERA Economic Consulting
Darling Park Tower 3
201 Sussex Street
Sydney NSW 2000
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Website: www.nera.com



Overview

Gregory Houston has twenty five years' experience in the economic analysis of markets and the provision of expert advice in litigation, business strategy, and policy contexts. His career as a consulting economist was preceded by periods working in a financial institution and for government.

Greg Houston has directed a wide range of competition, regulatory and financial economics assignments since joining NERA in 1989. His work in the Asia Pacific region principally revolves around the activities of the enforcement and regulatory agencies responsible for these areas, many of whom also number amongst his clients. Greg has advised clients on: merger clearance processes; competition proceedings involving allegations of anticompetitive conduct ranging from predatory pricing, anti-competitive agreements, anti-competitive bundling and price fixing; a wide range of infrastructure access regulation matters; intellectual property and damages valuation; and a number of securities class action and market manipulation proceedings. His industry experience spans the aviation, beverages, building products, cement, e-commerce, electricity and gas, forest products, grains, medical waste, mining, payments networks, petroleum, ports, rail transport, retailing, scrap metal, securities markets, steel, telecommunications, thoroughbred racing, waste processing and water sectors.

Greg has acted as expert witness in valuation, antitrust and regulatory proceedings before the courts, in various arbitration and mediation processes, and before regulatory and judicial bodies in Australia, Fiji, New Zealand, the Philippines, Singapore, the United Kingdom and the United States. In December 2005 Greg was appointed by the Hon Ian Macfarlane, then Minister for Industry, Tourism and Resources, to an Expert Panel to advise the Ministerial Council on Energy on achieving harmonisation of the approach to regulation of electricity and gas transmission and distribution infrastructure in Australia.

Greg serves on the Competition and Consumer Committee of the Law Council of Australia, the United States Board of Directors of National Economic Research Associates Inc as well as its Management Committee, and is head of NERA's Australian operations.

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Qualifications

1982 **UNIVERSITY OF CANTERBURY, NEW ZEALAND**
B.Sc. (First Class Honours) in Economics

Prizes and Scholarships

1980 University Junior Scholarship, New Zealand

Career Details

1987-89 **HAMBROS BANK, TREASURY AND CAPITAL MARKETS**
Financial Economist, London, United Kingdom

1983-86 **THE TREASURY, FINANCE SECTOR POLICY**
Investigating Officer, Wellington, New Zealand

Project Experience**Competition and Mergers**

2010-11 **Johnson Winter & Slattery/ATC and ARB**
Competitive effects of agreement
Expert reports and testimony in Federal Court proceedings concerning the competitive effects of restrictions on the use of artificial breeding techniques in the breeding of thoroughbred horses for racing.

2010-11 **Victorian Government Solicitor/State of Victoria**
Competitive effects of water trading rules
Expert report prepared in the context of Federal Court proceedings on the effects on inter-state trade of certain restrictions applying to the trading of water rights under Victorian law. The context for this work was a constitutional challenge brought against the state of Victoria by the state of South Australia.

2010-11 **Victorian Government Solicitor/State of Victoria**
Competitive effects of agreement
Expert reports and testimony in Federal Court proceedings concerning the competitive effects of restrictions on the use of artificial breeding techniques in the breeding of thoroughbred horses for racing.

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- 2010** **Australian Competition and Consumer Commission**
NBN Points of Interconnection
 Report and advice on the competition implications in the markets for both telecommunications backhaul and retail broadband services of different choices as to the number of ‘points of interconnection’ in the proposed architecture of the national broadband network.
- 2010** **JWS, Gilbert & Tobin/Jetset Travelworld, Stella Travel Services**
Merger clearance
 Advice on the competitive implications of the merger between Jetset Travelworld and Stella Travel Services.
- 2009-11** **Arnold + Porter/Visa Inc, Mastercard Inc and others**
Payment card markets
 Expert reports and deposition testimony on behalf of defendants in Re Payment Card Interchange Fee and Merchant Discount Antitrust Litigation on the effects of regulatory interventions in the Australian payment cards sector.
- 2009-10** **Australian Government Solicitor/ACCC**
Misuse of market power
 Expert report and testimony in the context of Federal Court proceedings brought by the ACCC against Cement Australia in relation to conduct alleged to have breached sections 45, 46 and 47 of the Trade Practices Act.
- 2008-10** **Gilbert & Tobin/Confidential**
Merger assessment
 Advice on the competitive implications of the then proposed merger and then subsequently the proposed iron ore production joint venture between BHP Billiton and Rio Tinto.
- 2009** **State Solicitor’s Office/Forest Products Commission**
Alleged breach of s46
 Expert advice in the context of Federal Court proceedings alleging breaches of section 46 of the Trade Practices Act.
- 2009** **Clayton Utz/Confidential Client**
Joint venture arrangement
 Reviewed the competitive implications under s50 of the Trade Practices Act of a proposed joint venture transaction in the rail industry.
- 2009** **Blake Dawson Waldron/ Airservices**
Effect of potential industrial action by Air Traffic Controllers
 Prepared an expert report in the context of a potential application to the Australian Industrial Relations Commission for termination or suspension of a bargaining period addressing the economic effect that certain forms of industrial action by Air Traffic Controllers would be likely to have on passengers, businesses, and the Australian economy.

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- 2005-06, 08-09** **Phillips Fox/Fortescue Metals Group**
Access to bottleneck facilities
 Expert report and testimony in the Federal Court proceedings concerning whether or not access to the BHP Billiton and Rio Tinto rail lines, serving iron ore export markets in the Pilbara, amounted to use of a production process. Subsequently, prepared expert reports on matters arising in interpreting the criteria for declaration under Part IIIA, and testified before the Competition Tribunal in late 2009.
- 2009** **Clayton Utz/Confidential Client**
Competitive implications of agreement
 Advice on the competitive effects of a joint venture arrangement in the port terminal sector, in the context of Federal Court proceedings brought by the ACCC under section 45 of the Trade Practices Act.
- 2009** **Australian Competition and Consumer Commission**
Competitive effects of buy-sell agreements
 Advice to the ACCC on the extent to which buy-sell arrangements between the four major refiner-marketers of petroleum products in Australia may be inhibiting competition in a relevant market.
- 2008-09** **Watson Mangioni/ICS Global**
Alleged misuse of market power
 Expert report prepared in the context of Federal Court proceedings alleging breaches of section 46 of the Trade Practices Act.
- 2008-09** **Australian Competition and Consumer Commission**
Competitive effects of various agreements
 Expert advice on potential theories of competitive harm arising from agreements between competitors in the oil and gas, and petroleum retailing industry sectors.
- 2008** **Johnson Winter Slattery/Pepsico**
Merger analysis
 Advice on the competitive implications certain potential transactions in the soft drinks sector.
- 2008** **Deacons/eBay**
Exclusive dealing notification
 Expert report submitted to the ACCC analysing the competitive effects of eBay’s proposal that users of its online marketplace be required to settle transactions using eBay’s associated entity, PayPal
- 2008-10** **Allens Arthur Robinson/Amcor**
Cartel damages assessment
 Advice and preparation of an expert report on the approach to and quantification of economic loss in the context of two separate actions seeking damages arising from alleged cartel conduct.

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- 2007-08** **Australian Energy Market Commission**
Wholesale gas and electricity markets, and implications for retail competition
Retained to provide an overview of the operation and structure of the wholesale gas and electricity markets within the National Electricity Market (NEM) jurisdictions and to identify the issues that the AEMC should consider when assessing the influence of the wholesale markets on competition within the retail gas market in each jurisdiction.
- 2006-07** **Essential Services Commission of South Australia Competition assessment**
Directed the preparation of a comprehensive report analysing the effectiveness of competition in retail electricity and gas markets in South Australia.
- 2006-07** **Allens Arthur Robinson/Confidential Client**
Merger clearance
Retained to provide advice on competition issues arising in the context of s50 clearance of a proposed merger in the board packaging industry.
- 2006-07** **Johnson Winter & Slattery/Confidential Client**
Damages assessment
Advice on the quantification of damages arising from alleged cartel conduct in the electricity transformer sector.
- 2006** **Minter Ellison/Confidential Client**
Misuse of market power
Expert economic advice in relation to market definition, market power and taking advantage in the context of an alleged price squeeze between wholesale and retail prices for fixed line telecommunications services, for proceedings brought under section 46 of the Trade Practices Act. The proceedings were withdrawn following regulatory amendments by the ACCC.
- 2006** **DLA Phillips Fox/Donhad**
Merger clearance
Preparation of an expert report on competition issues arising in the context of s50 clearance for the proposed Smorgon/One Steel merger.
- 2006** **Johnson Winter & Slattery/Qantas Airways**
Competition effects of proposed price fixing agreement
Assessed the competition effects of the proposed trans-Tasman networks agreement between Air New Zealand and Qantas Airways.

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- 2006** **Phillips Fox/ACCC**
Vertical foreclosure
 Advice in the context of proceedings before the Federal Court concerning the acquisition of Patrick Corporation by Toll Holdings. The proceedings were subsequently withdrawn following a S87B undertaking made by Toll.
- 2006** **Gilbert + Tobin/AWB**
Arbitration, access to bottleneck facilities
 Expert report and testimony in an arbitration concerning the imposition of throughput fees for grain received at port and so bypassing the grain storage, handling and rail transport network in South Australia.
- 2006** **Qantas Airways, Australia/Singapore**
Assessment of single economic entity
 Advice in the context of Qantas' Application for Decision to the Competition Commission of Singapore that the agreement between it and Orangestar did not fall within the ambit of the price-fixing and market sharing provisions of the Singapore Competition Act.
- 2005-06** **Qantas Airways, Australia/Singapore**
Competition effects of price fixing agreement
 Expert report submitted to the Competition Commission of Singapore evaluating the net economic benefits of a price fixing/market sharing agreement, in relation to an application for exemption from the section 34 prohibition in the Competition Act of Singapore.
- 2005-06** **Australian Competition Consumer Commission**
Electricity generation market competition
 Advice on the competition effects under S50 of the Trade Practices Act of three separate proposed transactions involving the merger of generation plant operating in the national electricity market.
- 2005** **Gilbert + Tobin/Hong Kong Government, Hong Kong**
Petrol market competition
 Directed a NERA team working with Gilbert + Tobin that investigated the effectiveness of competition in the auto-fuel retailing market in Hong Kong.
- 2005** **Phillips Fox/National Competition Council**
Access and competition in gas production and retail markets
 Retained as expert witness in the appeal before the WA Gas Review Board of the decision to revoke coverage under the gas code of the Goldfields pipeline. Proceedings brought by the pipeline operator were subsequently withdrawn.

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- 2004-05** **Gilbert + Tobin/APCA**
Competition and access to Eftpos system
Economic advisor to the Australian Payments Clearing Association in connection with the development of an access regime for the debit card/Eftpos system, so as to address a range of competition concerns expressed by the Reserve Bank of Australia and the ACCC. This work included an expert report examining barriers to entry to Eftpos and the extent to which these could be overcome by an access regime.
- 2003-05** **Phillips Fox/Austrac**
Misuse of market power
Retained to assist with all economic aspects of a potential Federal Court action under s46 of the Trade Practices Act alleging misuse of market power in the rail freight market.
- 2004** **Clayton Utz/Sydney Water Corporation**
Competition in sewage treatment
Retained to assist with Sydney Water’s response to the application to have Sydney’s waste water reticulation network declared under Part IIIa of the Trade Practices Act.
- 2004** **Blake Dawson Waldron/Boral**
Competition analysis of cement market
Advice on Boral’s proposed acquisition of Adelaide Brighton Ltd, a cement industry merger opposed in Federal Court proceedings by the ACCC. Boral subsequently decided not to proceed with the transaction.
- 2004** **Minter Ellison/Singapore Power**
Merger clearance
Advice on competition issues arising from the proposed acquisition of TXU’s Australian energy sector assets by Singapore Power. This included the submission of an expert report to the ACCC.
- 2004** **Mallesons/Orica**
Competition in gas production and retail markets
Retained as expert witness in the appeal by Orica against the Minister’s decision to revoke coverage under the gas code of the substantial part of the Moomba to Sydney gas pipeline. The case was subsequently settled.
- 2004** **Courts, Fiji**
Merger clearance, abuse of market power
Prepared a report for submission to the Fijian Commerce Commission on the competition implications of the Courts’ acquisition of the former Burns Philip retailing business, and related allegations of abuse of market power. The Commission subsequently cleared Courts of all competition concerns.

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- 2003-04** **Mallesons/Sydney Airport Corporation**
Competition in air travel market
 Expert report and testimony before the Australian Competition Tribunal on economic aspects of the application by Virgin Blue for declaration of airside facilities at Sydney Airport under Part IIIa of the Trade Practices Act.
- 2003-04** **Bartier Perry/ DM Faulkner**
Alleged collusive conduct
 Submitted an expert report to the Federal Court in connection with allegations under s45 of the Trade Practices Act of collusive conduct leading to the substantial lessening of competition in the market for scrap metal. The ‘substantial lessening of competition’ element of this case was subsequently withdrawn.
- 2002-04** **Essential Services Commission**
Effectiveness of competition
 Advisor on six separate reviews of the effectiveness of competition and the impact of existing or proposed measures designed to enhance competition in the markets for wholesale gas supply, port channel access services, liquid petroleum gas, retail electricity and gas supplies, and port services.
- 2003** **Gilbert + Tobin/AGL**
Vertical integration in electricity markets
 Prepared a report on the international experience of vertical integration of electricity generation and retailing markets, in connection with proceedings brought by AGL against the ACCC. This report examined the principles applied by competition authorities in assessing such developments, and evidence of the subsequent impact on competition.
- 2002-03** **National Competition Council**
Gas market competition
 Expert report in connection with the application by East Australian Pipeline Limited for revocation of coverage under the Gas Code of the Moomba to Sydney Pipeline System. The report addressed both the design of a test for whether market power was being exercised through pipeline transportation prices substantially in excess of long-run economic cost, and the assessment of existing prices by reference to this principle.
- 2001-03** **Blake Dawson Waldron/Qantas Airways**
Alleged predatory conduct
 Directed a NERA team advising on all economic aspects of an alleged misuse of market power (section 46 of the Trade Practices Act) in Federal Court proceedings brought against Qantas by the ACCC. The proceedings were withdrawn soon after responding expert statements were filed.

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- 2002** **Phillips Fox/AWB Limited**
Access and competition in bulk freight transportation
 Expert report on the pricing arrangements for third party access to the Victorian rail network and their impact on competition in the related bulk freight transportation services market, preparation for the appeal before the Australian Competition Tribunal of the Minister’s decision not to declare the Victorian intra-state rail network, pursuant to Part IIIA of the Trade Practices Act.
- 2002** **Australian Competition and Consumer Commission**
Anti-competitive bundling or tying strategies
 Prepared two (published) reports setting out an economic framework for evaluating whether the sale of bundled or tied products may be anti-competitive. These reports define the pre-conditions for such strategies to be anti-competitive, and discuss the potential role and pitfalls of imputation tests for anti-competitive product bundling.
- 2002** **Minter Ellison/SPI PowerNet**
Merger clearance
 Advice on competition issues arising in the acquisition of energy sector assets in Victoria.
- 2001** **Gilbert + Tobin/AGL**
Gas market competition
 Advised counsel for AGL in connection with the application by Duke Energy to the Australian Competition Tribunal for review of the decision by the National Competition Council to recommend that the eastern gas pipeline should be subject to price regulation under the national gas code.
- 2000** **One.Tel**
Competitive aspects of Mobile Number Portability
 Advised on the competitive aspects of proposed procedures for Mobile Number Portability and whether these arrangements breached the Trade Practices Act in relation to substantial lessening of competition.
- 2000** **Baker & McKenzie/Scottish Power**
Impact of consolidation on competition
 Expert report on the extent to which the acquisition of the Victorian electricity distribution and retail business, Powercor by an entity with interests in the national electricity market may lead to a 'substantial lessening of competition' in a relevant market.

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Regulatory Analysis

- 2011** **Energy Networks Association**
Network pricing rules
 Retained to advise on wide-ranging reforms to the network pricing rules applying to electricity and gas transmission and distribution businesses, as proposed by the Australian Energy Regulator.
- 2011** **Ausgrid**
Demand side management
 Prepared a report on incentives, constraints and options for reform of the regulatory arrangements governing the role of demand side management in electricity markets.
- 2010-11** **Transnet Corporation, South Africa**
Regulatory and competition policy
 Retained to advise on the preparation of a white paper on future policy and institutional reforms to the competitive and regulatory environment applying to the ports, rail and oil and gas pipeline sectors of South Africa.
- 2010-11** **Minter Ellison/UNELCO, Vanuatu**
Arbitral review of decision by the Vanuatu regulator
 Expert report and evidence before arbitrators on a range of matters arising from the Vanuatu regulator’s decision on the base price to apply under four electricity concession contracts entered into by UNELCO and the Vanuatu government. These included the estimation of the allowed rate of return including its country risk component, and the decision retrospectively to bring to account events from the prior regulatory period.
- 2002-11** **Orion New Zealand Ltd, New Zealand**
Electricity lines regulation
 Advisor on all regulatory and economic aspects of the implementation by the Commerce Commission of the evolving regimes for the regulation of New Zealand electricity lines businesses. This role has included assistance with the drafting submissions, the provision of expert reports, and the giving of expert evidence before the Commerce Commission.
- 1999-2004,**
2010-11 **Sydney Airports Corporation**
Aeronautical pricing notification
 Wide ranging advice on regulatory matters, including advice and reports in relation to SACL’s notification to the ACCC of substantial reforms to charges in 2001. This involved the analysis and presentation of pricing principles and their detailed application, through to discussion of such matters at SACL’s board, with the ACCC, and in public consultation forums. Subsequent advice on two Productivity Commission reviews of airport charging, and notifications to the ACCC on revised charges for regional airlines.

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- 2010** **Industry Funds Management/Queensland Investment Corporation**
Due diligence, Port of Brisbane
 Retained to advise on regulatory and competition matters likely to affect the future financial and business performance of the Port of Brisbane, in the context of its sale by the Queensland government.
- 2010-11** **QR National**
Regulatory and competition policy
 Advisor on the competition and regulatory implications of various potential structural options arising in the context of the privatisation of QR National’s coal and freight haulage businesses, and particularly those arising in the context of a ‘club ownership model’ proposed by a group of major coal mine owners.
- 2009-10** **New Zealand Electricity Industry Working Group, New Zealand Transmission pricing project**
 Advice to a working group comprising representatives from lines companies, generators, major users and Transpower on potential improvements to the efficiency of New Zealand’s electricity transmission pricing arrangements.
- 2007-09** **GDSE, Macau**
Electricity tariff reform
 Advice to the regulator of electricity tariffs in Macau on a series of potential reforms to the structure of electricity supply tariffs.
- 2007-11** **Powerco/CitiPower**
Regulatory advice
 Wide ranging advice on matters arising under the national electricity law and rules, such as the framework for reviewing electricity distribution price caps, the treatment of related party outsourcing arrangements, an expert report on application of the AER’s efficiency benefit sharing scheme, the potential application of total factor productivity measures in CPI-X regulation, and arrangements for the state-wide roll out of advanced metering infrastructure.
- 2001-09** **Auckland International Airport Limited, New Zealand**
Aeronautical price regulation
 Advice and various expert reports in relation to: the review by the Commerce Commission of the case for introducing price control at Auckland airport; a fundamental review of airport charges implemented in 2007; and the modified provisions of Part IV of the Commerce Act concerning the economic regulation of airports and other infrastructure service providers.

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- 2008** **Western Power**
Optimal treatment and application of capital contributions
 Advice on the optimal regulatory treatment of capital contributions, taking into account the effect of alternative approaches on tariffs, regulatory asset values, and network connection by new customers.
- 2000-08** **TransGrid**
National electricity market and revenue cap reset
 Regulatory advisor to TransGrid on a range of issues arising in the context of the national electricity market (NEM), including: the economics of transmission pricing and investment and its integration with the wholesale energy market, regulatory asset valuation, the cost of capital and TransGrid’s 2004 revenue cap reset by the ACCC.
- 2007** **Johnson Winter & Slattery/Multinet**
Review of outsourced asset management contracts
 Expert report developing a framework for assessing the prudence of outsourcing contracts in the context of the Gas Code, and evaluating the arrangements between Multinet and Alinta Asset Management by reference to that framework.
- 2007** **Ministerial Council on Energy**
Review of Chapter 5 of the National Electricity Rules
 Advice on the development of a national framework for connection applications and capital contributions in the context of the National Electricity Rules.
- 2006-07** **Ministerial Council on Energy**
Demand side response and distributed generation incentives
 Conducted a review of the MCE’s proposed initial national electricity distribution network revenue and pricing rules to identify the implications for the efficient use of demand side response and distributed generation by electricity network owners and customers.
- 2006** **Ministerial Council on Energy**
Electricity network pricing rules
 Advice on the framework for the development of the initial national electricity distribution network pricing rules, in the context of the transition to a single, national economic regulator.
- 2005-06** **Australian Energy Markets Commission**
Transmission pricing regime
 Advice to the AEMC on its review of the transmission revenue and pricing rules as required by the new National Electricity Law.

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- 1998-2006** **Essential Services Commission of Victoria**
Price cap reviews
 Wide ranging advice to the Essential Services Commission (formerly the Office of the Regulator-General), on regulatory, financial and strategic issues arising in the context of five separate reviews of price controls/access arrangements applying in the electricity, gas distribution, ports, rail and water sectors in Victoria. This work encompassed advice on the development of the Commission’s work program and public consultation strategy for each review, direct assistance with the drafting of papers for public consultation, the provision of internal papers and analysis on specific aspects of the review, drafting of decision documents, and acting as expert witness in hearings before the Appeal Panel and Victorian Supreme Court.
- 2004-05** **Ministerial Council of Energy**
Reform of the National Electricity Law
 Retained in two separate advisory roles in relation to the reform of the institutions and legal framework underpinning the national energy markets. These roles include the appropriate specification of the objectives and rule making test for the national electricity market, and the development of a harmonised framework for distribution and retail regulation.
- 2004-05** **Johnson Winter Slattery, ETSA Utilities**
Price determination
 Advice on a wide range of economic and financial issues in the context of ETSA Utilities’ application for review of ESCOSA’s determination of a five year electricity distribution price cap.
- 2004** **Deacons/ACCC**
Implementation of DORC valuation
 Prepared a report on the implementation of a cost-based DORC valuation, for submission to the Australian Competition Tribunal in connection with proceedings on the appropriate gas transportation tariffs for the Moomba to Sydney gas pipeline.
- 2003-04** **Natural Gas Corporation, New Zealand**
Gas pipeline regulation
 Advisor in relation to the inquiry by the Commerce Commission into the case for formal economic regulation of gas pipelines. This role included assistance with the drafting of submissions, the provision of expert reports, and the giving of evidence before the Commerce Commission.

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- 2001-03** **Rail Infrastructure Corporation**
Preparation of access undertaking
 Advised on all economic aspects arising in the preparation of an access undertaking for the New South Wales rail network. Issues arising included: pricing principles under a ‘negotiate and arbitrate’ framework, asset valuation, efficient costs, capacity allocation and trading, and cost of capital.
- 2002** **Clayton Utz/TransGrid**
National Electricity Tribunal hearing
 Retained as the principal economic expert in the appeal brought by Murraylink Transmission Company of NEMMCO’s decision that TransGrid’s proposed South Australia to New South Wales Electricity Interconnector was justified under the national electricity code’s ‘regulatory test’.
- 2001-02** **SPI PowerNet**
Revenue cap reset
 Advisor on all regulatory and economic aspects of SPI PowerNet’s application to the ACCC for review of its revenue cap applying from January 2003. This included assistance on regulatory strategy, asset valuation in the context of the transitional provisions of the national electricity code, drafting and editorial support for the application document, and the conduct of a ‘devil’s advocate’ review.
- 2002** **Corrs Chambers Westgarth/Ofgar**
Economic interpretation of the gas code
 Provision of expert report and sworn testimony in the matter of Epic Energy v Office of the Independent Gas Access Regulator, before the Supreme Court of Western Australia, on the economic interpretation of certain phrases in the natural gas pipelines access code.
- 2001** **ACCC**
Determination of local call resale prices
 Advised the ACCC regarding the determination of local call resale prices from Telstra’s fixed line network. This included providing advice on how the cost of community service obligations should be allocated to competitors with wholesale access to local calls.
- 2000** **Gilbert + Tobin/AGL**
Vesting contract terms
 Advised AGL SA in connection with its application to the ACCC for revocation and substitution of both vesting contract terms and network pricing provisions for the retail supply of electricity in South Australia.
- 1998, 2000** **Rail Access Corporation**
Regulatory and pricing strategy
 Advisor on regulatory and financial issues arising in the context of the

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1998/99 IPART review of the NSW rail access regime. Subsequently, prepared two board papers on, first, the principles for commercially sustainable pricing in the context of the NSW access regime and, second, on issues and options for addressing the growing imbalance between costs and revenues, including the probable need to finance a significant increase in capital expenditure.

1998-99**MWSS Regulatory Office, Philippines****Regulation by concession**

Advised the MWSS Regulatory Office on its response to applications for “extraordinary price adjustments” under the terms of the two, twenty five-year, water and wastewater concession agreements. This involved an assessment of the grounds for the applications, the associated financial impact, and the appropriate rate of return to be applied in determining the consequent price adjustment.

Subsequently, provided expert testimony in the arbitration of one applicant’s appeal of the Regulatory Office’s decision.

Valuation and Damages Analysis**2011****Kelly & Co/Cooper Basin Producers****Wharfage dues agreement arbitration**

Expert report and testimony in arbitration proceedings to determine the ‘normal wharfage dues’ to be paid for use of a facility that assists the transfer of petroleum products to tanker ships from a processing terminal in South Australia.

2010**Barclays Capital/Confidential Client****Due diligence, Alinta Energy**

Retained to advise on the key industry related risks and issues facing Alinta Energy’s gas and electricity assets during the due diligence process associated with its recapitalisation and sale.

2009**Freehills/Santos****Gas supply agreement arbitration**

Analysis and advice on factors influencing the market price of gas in eastern Australia, to be determined in a potential arbitration concerning the terms of a substantial long term gas supply agreement.

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- 2008-09 Clayton Utz/Origin Energy
Gas supply agreement arbitration**
Expert reports and testimony in an arbitration concerning the market price of gas, which was determined and applied in a substantial long term gas supply agreement.
- 2008-09 Minter Ellison/Confidential client
Treatment of past capital contributions**
Expert report and evidence given in arbitration proceedings on the extent to which a discount should apply under a long term water supply contract, in recognition of a capital contribution made at the outset of the agreement.
- 2008 Freehills/Tenix Toll
Logistics contract arbitration**
Advice on the appropriate methodology for adjusting prices under a long term logistics contract in light of changing fuel costs.
- 2008 BG plc
Market analysis**
Retained to advise on economic aspects of the operation of the east Australian wholesale gas market.
- 2008 Gilbert + Tobin/Waste Services NSW
Damages estimation**
Damages assessment in the context of a Federal Court finding of misleading and deceptive conduct in relation to the extent of environmental compliance in the provision of waste services.
- 2007 Meerkin & Apel/SteriCorp
Damages assessment**
Expert report and testimony in the context of an international arbitration on commercial damages arising from alleged non-performance of a medical waste processing plant.
- 2006-07 Middletons/Confidential Client
Damages assessment**
Retained to provide an expert report on the methodological framework for assessing alleged damages arising from contractual non-performance and associated forecast for demand and supply conditions and prices for natural gas and ethane prices and over a ten year period.

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- 2006** **Confidential Client/Australia**
Valuation of digital copyright
 Advice in relation to the negotiation for a licence for digital copyright. This included the discussion of the matters that should be considered in determining fees for a digital copyright licence, including the extent to which digital material should be valued differently from print material and whether the charging mechanism for print is appropriate for digital copyright.
- 2006** **Minter Ellison/Australian Hotels Association**
Valuation of copyright material
 Expert report in the context of proceedings before the Copyright Tribunal concerning the appropriate valuation of the rights to play recorded music in nightclubs and other late night venues.
- 2005-06** **Minter Ellison and Freehills/Santos**
Gas supply agreement arbitrations
 Principal economic expert in two separate arbitrations of the price to apply following review of two substantial gas supply agreements between the South West Queensland gas producers and, respectively, a large industrial customer and major gas retailer.
- 2002-03** **ActewAGL**
Consumer willingness to pay
 Directed a one year study of consumers' willingness to pay for a range of attributes for electricity, gas and water services in the ACT. This study involved the use of focus groups, the development of a pilot survey and then the implementation of a stated preference choice modelling survey of household and commercial customer segments for each utility service.
- 2002-03** **National Electricity Market Management Co**
Participant fee determination
 Advice to NEMMCO in the context of its 2003 Determination of the structure of Participant Fees, for the recovery of NEMMCO and NECA's costs from participants in the national electricity market.
- 2001-03** **Minter Ellison/Optus Networks**
Arbitration of market lease fee
 Expert evidence in the mediation and then arbitration between Optus Networks and United Energy on the appropriate annual market fee for leasing electricity pole space for the attachment of HFC coaxial cable.

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- 2002** **Screenrights**
Non-market valuation methods
 Advice on the range and suitability of revealed preference and stated preference survey methodologies for valuing the retransmission of free to air television broadcasts for the purposes of determining the ‘equitable remuneration’ to be paid for retransmission of copyright material contained in free-to-air television broadcasts.
- 2001** **Gilbert & Tobin/One.Tel**
Arbitration on the local loop service
 Advice on the pricing of Telstra’s unconditioned local loop service (ULLS) for use in arbitration.
- 2001** **Department of Natural Resources and Environment**
Efficient pricing of water services
 Prepared a report setting out the principles for efficient pricing of urban water services, an evaluation of the structure of existing wholesale and retail water tariffs in metropolitan Melbourne, and recommended reforms.
- 1998-2000** **TransGrid and EnergyAustralia**
Cost effectiveness study of transmission capacity augmentation
Directed a NERA team that conducted a cost effectiveness analysis of alternative options for augmenting transmission capacity to the Sydney CBD area. This included identification and evaluation of alternative transmission, generation and demand side management options, and application of the ‘regulatory test’, as defined in the then national electricity code.
- Securities and Finance**
- 2011** **Barringer Leather /Confidential client**
Market Manipulation
 Expert report prepared in the context of criminal proceedings brought in the Supreme Court of NSW alleging market manipulation in the trading of certain ASX-listed securities.
- 2011** **Freehills/Confidential client**
Shareholder damages assessment
 Expert advice in connection with representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of an ASX-listed entity.

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- 2010-11** **Wotton Kearney/Confidential client**
Misleading and deceptive conduct
 Expert report and analysis in light of investor claims and pending litigation following the freezing of withdrawals from two fixed interest investment trusts that primarily held US-denominated collateralised debt obligations (CDOs).
- 2010-11** **Slater & Gordon/Confidential client**
Shareholder damages assessment
 Expert report for use in connection with representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2010-11** **Maurice Blackburn/Confidential client**
Shareholder damages assessment
 Analysis and pending expert report for use in connection with representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2010-11** **Mallesons /ActewAGL**
Judicial review of rate of return determination
 Expert report and testimony in Federal Court proceedings seeking judicial review of a decision by the Australian Economic Regulator of its determination of the risk free rate of interest in its price setting determination for electricity distribution services.
- 2009-11** **William Roberts/Clime Capital (Credit Corp)**
Shareholder damages assessment
 Preparation of two expert reports in representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2009** **Jemena Limited**
Cost of equity estimation
 Co-authored an expert report on the application of a domestic Fama-French three-factor model to estimate the cost of equity for regulated gas distribution businesses.
- 2009** **Minter Ellison/Confidential client**
Misleading and deceptive conduct
 Expert report in light of investor claims and pending litigation following the freezing of withdrawals from a fixed interest investment trust that primarily held US-denominated collateralised debt obligations (CDOs), as offered by a major Australian financial institution. Analysis undertaken included the extent to which the investment risks were adequately described in the fund documents, and the quantum of any potential damages arising.

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- 2008-09 Clayton Utz/Fortescue Metals Group
Materiality of share price response**
Preparation of expert report and testimony before the WA division of the Federal Court addressing alleged breaches of the ASX continuous disclosure obligations and the associated effect on the price of FMG securities arising from statements made by it in 2004.
- 2008-09 Energy Trade Associations – APIA, ENA and Grid Australia
Value of tax imputation credits**
Preparation of expert report on the value to investors in Australian equities of tax imputation credits, for submission to the Australian Energy Regulator.
- 2008-09 Freehills/Centro
Shareholder damages assessment**
Assistance in the estimation of potential damages arising from then anticipated representative proceedings concerning accounting misstatements and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2008 Slater & Gordon/Boyd (Downer)
Shareholder damages assessment**
Preparation of an expert report for submission to a mediation on the damages arising in representative proceedings before the Federal Court alleging accounting misstatements and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2007-08 Maurice Blackburn/Watson (AWB)
Shareholder damages assessment**
Preparation of advice estimating the damages arising in representative proceedings before the Federal Court alleging accounting misstatements and/or breach of the continuous disclosure obligation by the ASX-listed entity, AWB Limited.
- 2007 Freehills/Telstra Corporation
Shareholder damages assessment**
Advice and assistance in the preparation of the expert report of Dr Fred Dunbar submitted to the Federal Court in the context of proceedings alleging breaches of the continuous disclosure obligations by Telstra. The principal subject of this work was the assessment of the extent to which of material alleged not to have been disclosed was already known and incorporated in Telstra's stock price.

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- 2006-07** **Maurice Blackburn/Dorajay (Aristocrat)**
Shareholder damages assessment
 Advice and assistance in the preparation of the expert report of Dr Fred Dunbar submitted to the Federal Court in the context of proceedings between Dorajay and Aristocrat Leisure. The principal subject of this work was the assessment of the extent and duration of share price inflation arising from various accounting misstatements and alleged breaches of the continuous disclosure obligations.
- 1999-2001** **Australian Competition and Consumer Commission**
Cost of capital
 Various assignments in relation the cost of debt and equity capital for regulated businesses. These included: an analysis of the approach taken by regulators overseas in relation to the treatment of taxation in estimating the WACC, and the use of pre-tax versus post-tax WACC formulations in regulation; and, a survey of regulatory decisions in relation to the cost of capital across a range of international jurisdictions. Two reports have been published by the ACCC.
- Institutional and Regulatory Reform**
- 2008-11** **Department of Sustainability and Environment**
Management of bulk water supply
 Various advice on the concept and merits of establishing market based arrangements to guide both the day-to-day operation of the bulk water supply system in metropolitan Melbourne, as well as the trading of rights to water between the metropolitan water supply system and those throughout the state of Victoria.
- 2008** **Department of Treasury and Finance**
Access regime for water networks
 Prepared a report on the principles that should be applied in developing a state-wide third party access regime for water supply networks.
- 2007** **Economic Regulatory Authority**
Options for competitive supply bulk water
 Prepared a report on institutional and structural reforms necessary to encourage the development of options for the procurement of alternative water supplies from third parties.
- 2006** **Bulk Entitlement Management Committee**
Development of urban water market
 Prepared a report for the four Melbourne water businesses on options for devolution of the management of water entitlements from collective to individual responsibility, including the development of associated arrangements for oversight and co-ordination of the decentralised management and trading of water rights.

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- 2003-05** **Goldman Sachs/Airport Authority, Hong Kong**
Framework for economic regulation
 Lead a team advising on the options and detailed design of the economic regulatory arrangements needed to support the forthcoming privatisation of Hong Kong Airport.
- 2003-04** **Ministry of Finance, Thailand**
Framework for economic regulation
 Lead a team advising on the detailed design and implementation of a framework for the economic regulation of the Thai water sector in order to support the proposed corporatisation and then privatisation of the Metropolitan Water Authority of Bangkok.
- 2003** **Metrowater and Auckland City, New Zealand**
Water industry reform options
 Report on alternative business models for the Auckland City water services supplier, Metrowater, in the context of proposals for structural reform elsewhere in the industry. This work examined the long term drivers of water industry efficiency and the costs and benefits of alternative structural reform options.

Sworn Testimony, Transcribed Evidence⁹⁷

- 2011** **Expert evidence before the Federal Court on behalf of the Australian Turf Club and Australian Racing Board in the matter of Bruce McHugh v ATC and Others**
 Expert report, transcribed evidence, Sydney, 12 and 14 October 2011
- Expert evidence in arbitration proceedings before J von Doussa, QC, on behalf of Santos in the matter of Santos and Others v Government of South Australia**
 Expert report, transcribed evidence, Adelaide, 13-15 September 2011
- Expert evidence before a panel of arbitrators on behalf of UNELCO in the matter of UNELCO v Government of Vanuatu**
 Expert report, transcribed evidence, Melbourne, 23 March and 21 April 2011
- Expert evidence before the Federal Court on behalf of ActewAGL in the matter of ActewAGL v Australian Economic Regulator**
 Expert report, sworn evidence, Sydney, 17 March 2011
- Deposition Testimony in Re Payment Care Interchange and Merchant Discount Litigation, in the United States District Court for the Eastern District of New York**
 Deposition testimony, District of Columbia, 18 January 2011

⁹⁷ Past ten years.

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- 2010** **Expert evidence before the Federal Court in behalf of the Australia Competition and Consumer Commission in the matter of ACCC v Cement Australia and others**
Expert report, sworn evidence, Brisbane, 19-21 October 2010
- Expert evidence on behalf of Orion NZ, at the Commerce Commission’s Conference on its Input Methodologies Emerging View Paper**
Transcribed evidence, public hearings, Wellington, 24 February 2010
- Deposition Testimony in *Re Payment Card Interchange and Merchant Discount Antitrust Litigation*, in the United States District Court for the Eastern District of New York**
Deposition Testimony, District of Columbia, 18 February 2010
- 2009** **Expert evidence before the Australian Competition Tribunal on behalf of Fortescue Metals Group Ltd, in the matter of Application for Review of Decision in Relation to Declaration of Services Provided by the Robe, Hamersley, Mt Newman and Goldsworthy Railways**
Expert report, sworn evidence, Melbourne, 12-13 October and 5-6 November 2009
- Expert evidence on behalf of Orion NZ, at the Commerce Commission’s Conference on its Input Methodologies Discussion Paper**
Transcribed evidence, public hearings, Wellington, 16 September 2009
- Expert evidence before the Federal Court on behalf of Fortescue Metals Group Ltd, in the matter of ASIC v Fortescue Metals Group and Andrew Forrest**
Expert report, sworn evidence, Perth, 29 April–1 May 2009
- Expert report and evidence in arbitration proceedings before Hon Michael McHugh, AC QC, and Roger Gyles, QC, between Origin Energy and AGL**
Expert report, sworn evidence, Sydney, 19-24 March 2009
- 2008** **Expert evidence on behalf of Orion NZ, at the Commerce Commission’s Conference on its Draft Decision on Authorisation for the Control of Natural Gas Pipeline Services**
Transcribed evidence, public hearings, Wellington, 21 February 2008
- 2007** **Expert report and evidence in arbitration proceedings before Sir Daryl Dawson between SteriCorp and Stericycle Inc.**
Expert report, sworn evidence, 11 July 2007

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- 2006** **Expert report and evidence in arbitration proceedings before Sir Daryl Dawson and David Jackson, QC, between Santos and others, and AGL**
Expert report, sworn evidence, November 2006
- Expert report and evidence before the Federal Court on behalf of Fortescue Metals Group in the matter of BHP Billiton v National Competition Council and Others**
Expert report, sworn evidence, November 2006
- Expert report and evidence in arbitration proceedings before Sir Daryl Dawson and David Jackson, QC, between Santos and Others, and Xstrata Queensland**
Expert report, sworn evidence, September 2006
- Expert report and evidence before the Copyright Tribunal on behalf of the Australian Hotels Association and others in the matter of PPCA v AHA and Others**
Expert report, sworn evidence, May 2006
- Expert report and evidence in arbitration proceedings before Hon Michael McHugh, AC QC, on the matter of AWB Limited v ABB Grain Limited**
Expert report, sworn evidence, 24 May 2006
- Expert report and evidence to Victorian Appeal Panel, in the matter of the appeal by United Energy Distribution of the Electricity Price Determination of the Essential Services Commission**
Expert report, sworn evidence, 10 February 2006
- 2005** **Expert evidence on behalf of Orion NZ, at the Commerce Commission’s Conference on its Notice of Intention to Declare Control of Unison Networks**
Transcribed evidence, public hearings, Wellington, 17 November 2005
- Expert evidence on behalf of Orion NZ, at the Commerce Commission’s Conference on Asset Valuation choice and the electricity industry disclosure regime**
Transcribed evidence, public hearings, Wellington, 11 April 2005
- 2004** **Expert report and evidence to the Australian Competition Tribunal, in the matter of Virgin Blue Airlines v Sydney Airport Corporation**
Expert reports, sworn evidence, 19-20 October 2004

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- Expert evidence on behalf of Orion NZ, at a Commerce Commission’s Conference on the ODV Handbook for electricity lines businesses**
Transcribed evidence, public hearings, Wellington, 26 April 2004
- 2003**
- Expert evidence on behalf of Orion NZ, in response to the Commerce Commission’s draft decision on re-setting the price path threshold for electricity lines businesses**
Transcribed evidence, public hearings, Wellington, 5 November 2003
- Expert evidence on behalf of NGC Holdings, in response to the Commerce Commission’s draft framework paper for the gas control inquiry.**
Transcribed evidence, public hearings, 3 September 2003
- Affidavit submitted to the Federal Court, in the matter of ACCC v DM Faulkner and Others**
Expert report, Federal Court of Australia, May 2003
- Expert evidence on behalf of Orion NZ, in response to the Commerce Commission’s draft decision on a targeted control regime for electricity lines businesses**
Transcribed evidence, public hearings, Wellington, 25 March 2003
- 2002**
- Expert evidence on behalf of Orion NZ, in the Commerce Commission’s review of asset valuation methodologies for electricity lines businesses**
Transcribed evidence, public hearings, Wellington, 25 November 2002
- Expert report and evidence on behalf of Optus Networks and Optus Vision Ltd, in the matter of an arbitration with United Energy Ltd**
Expert report, prior to settlement, 18 October 2002
- Expert statement submitted to the National Electricity Tribunal, in the matter of Murraylink Transmission Company v NEMMCO, TransGrid, and others**
Sworn Testimony, National Electricity Tribunal, Melbourne, 26 August 2002
- Expert evidence on behalf of Orion NZ, in the Commerce Commission’s review of control regimes for electricity lines businesses**
Transcribed evidence, public hearings, Wellington, 21 August 2002

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Affidavit and testimony before the Supreme Court of Western Australia, in the matter of Epic Energy v Dr Ken Michael – Independent Gas Access Regulator

Sworn testimony, Supreme Court of Western Australia, November 2002

2001 Expert evidence on behalf of Auckland International Airport, in the Commerce Commission’s review of airfield price control

Transcribed evidence, public hearings, Wellington, 4-5 September 2001

Expert evidence on behalf of Optus Networks, in the matter of Optus Networks v United Energy

Mediation before Trevor Morling QC, Sydney, August and September 2001

Expert evidence on behalf of Sydney Airports Corporation in the Productivity Commission’s review of airport regulation

Transcribed evidence, public hearings, Melbourne, 3 April 2001

Affidavit submitted to Supreme Court of Victoria, in the matter of TXU v Office of the Regulator-General

Sworn testimony, Supreme Court of Victoria, 23-26 March 2001

Speeches and Publications⁹⁸

2011 Law Council of Australia - Competition Workshop

Coordinated effects in merger assessments
Speech, Gold Coast, 27 August 2011

ACCC Regulatory Conference

Adapting Energy Markets to a Low Carbon Future
Speech, Brisbane, 28 July 2011

2010 IPART Efficiency and Competition in Infrastructure

Improving Performance Incentives for GTE’s
Speech, Sydney, 7 May 2010

Law and Economics Association of New Zealand Shareholder Class Actions – A Rising Trend in Australia

Speech, Auckland and Wellington, 15-16 November 2010

⁹⁸ Past five years

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- 2009**
- ACCC Regulatory Conference**
Substitutes and Complements for Traditional Regulation
Speech, Gold Coast, 30 July 2009
- Minter Ellison Shareholder Class Action Seminar**
Investor Class Actions – Economic Evidence
Speech, Sydney, 18 March 2009
- Competition Law and Regulation Conference**
Commerce Amendment Act: Impact on Electricity Lines Businesses
Speech, Wellington, 27 February 2009
- 2008**
- Non-Executive Directors**
Shareholder Class Actions in Australia
Speech, Sydney, 28 July 2008
- Mergers & Acquisitions: Strategies 2008**
Competition Law Implications for Mergers & Acquisitions
Speech, Sydney, 27 May 2008
- Institute for Study of Competition and Regulation**
Role of Merits Review under Part 4 and Part 4A of the Commerce Act
Speech, Wellington, 20 February 2008
- 2007**
- Law Council of Australia - Trade Practices Workshop**
Hypothetical breach of s46
Economic expert in mock trial, 20 October 2007
- Assessing the Merits of Early Termination Fees, *Economics of Antitrust: Complex Issues in a Dynamic Economy*, Wu, Lawrence (Ed)**
NERA Economic Consulting 2007
- Assessing the Impact of Competition Policy Reforms on Infrastructure Performance**
ACCC Regulation Conference
Speech, Gold Coast, 27 July 2007
- 2006**
- Trade Practices Workshop**
Access to Monopoly Infrastructure Under the Trade Practices Act: Current Issues with Part IIIa and Section 46
Conference Paper Co-Author, Canberra, 22 July 2006

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Publicly Available Reports⁹⁹

- 2011**
- Potential Market Power in the NEM**
A report for the Australian Energy Market Commission September 2011.
- Asset Values in Workably Competitive Markets**
A report for Orion
October 2009
- Cost of Equity – Fama-French Three-Factor Model**
A report for Jemena Gas Networks
August 2009
- 2008**
- The Value of Imputation Credits**
A report for the ENA, Grid Australia and APIA
August 2008
- Economic Interpretation of Clauses 6.5.6 and 6.5.7 of the National Electricity Rules**
A report for Energy/Australia
May 2008
- The Gas Supply Chain in Eastern Australia**
A report for the Australian Energy Market Commission
March 2008
- The Wholesale Electricity Market in Australia**
A report for the Australian Energy Market Commission
March 2008
- 2007**
- Treatment of Outsourcing Contracts**
A report for the Multinet Gas Distribution partnership
December 2007
- Review of Commerce Commission’s Draft Gas Distribution Services Paper**
A report for Orion New Zealand Limited
November 2007
- Equity Beta for Gas Distribution**
A report for the APIA, ENA and ETNOF
October 2007

⁹⁹ Past five years.

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Equity Beta for Gas Distribution

A report for the APIA, ENA and ETNOF
October 2007

Assessing the Impact of Competition Policy Reforms on Australia's Infrastructure Performance

A report for the Australian Competition and Consumer Commission
July 2007

Review of the Effectiveness of Energy Retail Market Competition in South Australia

A report for the Essential Services Commission of South Australia,
June 2007

2007

Remuneration for the Use of Copyright Material – Comment on the ACCC's Guidelines

A report for Minter Ellison, January 2007

2006**Consistency of the Transmission Rules with the Competition Principles Agreement**

A report for the Australian Energy Market Commission, December 2006

Study of the Hong Kong Auto-fuel Retail Market

A report for the Economic Development and Labour Bureau, Hong Kong, April 2006

Expert Panel on Energy Access Pricing

A report to the Ministerial Council on Energy, April 2006

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