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Review of ERA's draft decision on allocating total revenue

A report for Gilbert + Tobin

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1. Introduction

I have been asked by Gilbert + Tobin (G+T) to prepare this report on behalf of Goldfields Gas Transmission Pty Ltd (GGT). Its subject is certain aspects of the December 2015 draft decision (the draft decision) of the Economic Regulation Authority of Western Australia (ERA or the Authority) on the Access Arrangement for the Goldfields Gas Pipeline (GGP), as proposed by GGT. GGT's proposed revised access arrangement is to apply for the period 1 July 2016 to 31 December 2019 (AA3), and is to be evaluated under the relevant provisions of the National Gas Law (NGL or the law) and National Gas Rules (NGR or the rules).

1.1 Scope of report

The particular aspect of the draft decision on which G+T has asked me to comment is the ERA's decision not to accept GGT's proposed method for allocating total revenue to the covered component of the GGP. Rather, the ERA's draft decision is that only a share of 'joint costs' should be allocated to the covered pipeline, with the remainder of the costs incurred in providing these services not allocated. G+T's instructions to me are attached as annexure A.

In preparing this report I have been provided with a copy of the Federal Court practice note CM7, entitled Expert Witnesses in Proceedings in the Federal Court of Australia (the Guidelines). I have read the Guidelines and agree to be bound by them. My declaration in compliance with the Guidelines is set out in section 5.

1.2 Qualifications

I am a founding Partner of the economic consulting firm, HoustonKemp. Over a period of more than twenty five years I have accumulated substantial experience in the economic analysis of markets and the provision of expert advice and testimony in litigation, business strategy and policy contexts. I have developed that expertise in the course of advising corporations, regulators and governments in Australia and the Asia-Pacific region on a wide range of regulatory, competition and financial economics matters.

My industry sector experience spans aviation, beverages, building products, cement, e-commerce, electricity and gas, forest products, grains, medical waste, mining, payments networks, office products, petroleum, ports, rail transport, retailing, scrap metal, securities markets, steel, telecommunications, thoroughbred racing, waste processing and water. I have testified on these matters on numerous occasions before arbitrators, appeal panels, regulators, the Federal Court of Australia, the Australian Competition Tribunal and other judicial or adjudicatory bodies.

I hold a BSc (Hons) in Economics, a University of Canterbury post-graduate degree, which I was awarded with first class honours in 1983.

Of some relevance to matters the subject of this report, in 2004 I was one of three members of an expert panel retained by the Standing Committee of Officials of the then Ministerial Council on Energy to advise on the specification of a proposed national electricity objective, which was to be included in the then proposed national electricity law. The present form of the national gas objective (NGO) – the central reference point for the particular questions that I have been asked to address by G+T – has its origins in the findings and recommendations of that expert panel.

Separately, in December 2005 I was appointed to an expert panel convened by the then Minister for Industry and Resources, the Hon Ian Macfarlane, to prepare a report for the Ministerial Council on Energy on the harmonisation of the price determination elements of the access regimes for electricity network and gas pipeline services. The expert panel provided its report in April 2006, and many of its recommendations form the basis for the current framework of national gas and electricity laws and rules.

I attach a copy of my curriculum vitae as annexure B.

I have been assisted in the preparation of this report by my Sydney-based colleague, Martin Chow. Notwithstanding this assistance, the opinions in this report are my own, and I take full responsibility for them.

1.3 Structure of report

The remainder of my report is structured as follows:

- in section 2, I describe the relevant aspects of the services provided by the GGP, the determination of total revenues for covered services as required by the rules and the law, and the economic framework I apply in my assessment of the alternate methods for allocating total revenue, as proposed by GGT and as set out in the ERA's draft decision;
- in section 3, I describe the Authority's and GGT's proposed method for allocating total revenue to services provided by means of the covered pipeline and provide my assessment of these methodologies, having regards to the three dimensions of economic efficiency encapsulated within the NGO;
- in section 4, by way of conclusion I present my answers to the particular questions put to me by G+T; and
- section 5 contains my declaration, in accordance with the Guidelines.

2. Background and context

In this section I describe relevant aspects of the services provided by the GGP, along with the determination of the total revenue to be recovered from reference services, as required by the rules and guided by the law.

I also describe my understanding of the relevant provisions of the law and, on this basis, set out the economic framework I apply in my assessment of the alternate allocations of total revenue proposed by GGT and as set out in the ERA's draft decision.

2.1 The Goldfields gas pipeline

The GGP is a 1,380 kilometre gas transmission pipeline that provides gas transportation services to a range of locations between Yaraloola and Kalgoorlie.

A portion of the GGP's capacity is 'covered' under the relevant provisions¹ of the NGL and, consequently, GGT is required to submit an access arrangement for approval by the ERA in respect of the covered pipeline. I refer throughout my report to the covered portion of the GGP as 'the covered pipeline'.

2.1.1 The covered pipeline

The market for reference services provided by the covered pipeline is characterised by a relatively small number of large customers primarily involved in the mining of natural resources.

Since the pipeline was completed in 1996, the capacity of the covered pipeline has expanded twice, once in 2000-01 when an additional compressor was installed at Wiluna, and again in 2003-04 when a compressor was installed at Paraburdoo. Subsequent expansions have been treated as uncovered capacity (see below). I understand from GGT that the current capacity on the covered pipeline is approximately 103TJ/day.²

The covered pipeline has operated at, or near, capacity for the last decade, and this is expected to continue throughout AA3. Further, the current, near full, capacity of the covered pipeline is underpinned by haulage service contracts, the earliest of which is due to expire in 2029.

These contracts generally involve a commitment to take or pay for the relevant capacity, at a price that is also agreed over the relevant period (and which may or may not be the same as the reference tariff). Put another way, the terms of such contracts mean that neither the service provider nor existing users of the covered pipeline have any ability or incentive to change either price or non-price terms, or the quantities that are to be bought and sold, throughout the period over which they have contracted to use reference services.

2.1.2 The uncovered pipeline

There is an uncovered portion of the GGP that is used to provide services that are not covered and not subject to regulatory obligations. I refer throughout my report to the uncovered portion of the GGP as 'the uncovered pipeline'.

The uncovered pipeline is not subject to an access arrangement and the corresponding access prices are negotiated on a commercial basis and stipulated in commercial agreements. For the avoidance of doubt, I note that there is no nexus between these commercially negotiated prices and any access arrangement applying to the covered pipeline.

¹ NGL, section 15 (Pipeline coverage criteria).

² I note that the ERA contends that the capacity of the covered pipeline is 109TJ/day. See: ERA, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline Submitted by Goldfield Gas Transmission Pty Ltd*, 17 December 2015, para 174

Nevertheless, the relevance of the uncovered pipeline in the context of the access arrangement for the covered pipeline arises if the rules permit and/or require the allocation between the covered pipeline and uncovered pipeline of joint costs that are not directly attributable to particular pipeline.³

2.2 Allocation of total revenue

The NGR or rules establish a framework for the development of an access arrangement that governs the terms and conditions under which reference services are made available by pipeline owners. The rules also prescribe a framework for determining the total revenue to be derived from pipeline services in each regulatory year of an access arrangement.⁴

For the purpose of determining the level of revenue to be recovered from the provision of reference services, the rules require that total revenue is allocated between reference services and other services in the ratio in which costs are allocated between these services.⁵ Further, the rules require that:⁶

Costs are to be allocated between reference and other services as follows:

- a) costs directly attributable to reference services are to be allocated to those services; and
- b) costs directly attributable to pipeline services that are not reference services are to be allocated to those services; and
- c) other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the AER.

Although the rules require the allocation of costs to be consistent with the revenue and pricing principles (RPPs), further guidance is provided by the NGO, which is the foundational reference point for decisions made by regulators under the NGL and its accompanying rules.

The revenue and pricing principles and NGO are prescribed in the NGL.

2.2.1 The revenue and pricing principles

Section 24 of the law identifies a number of RPPs. Of particular relevance to the allocation of costs required by rule 93(2)(c) are the first two RPPs, which state that:

1. A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in –
 - a) providing reference services; and
 - b) complying with a regulatory obligation or requirement or making a regulatory payment.
2. A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes –
 - a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and

³ The correct construction of rule 93 (allocation of total revenue and costs), and whether it permits the allocation of costs (other than direct costs) between reference services and services provided by means of uncovered capacity, is a legal issue. For the purposes of this report, I have assumed that the approach taken by the ERA in the draft decision is legally permissible in order to analyse, from an economic perspective, the ERA's findings that its cost allocation approach ensures that the reference tariff more closely reflects the efficient cost of these services, and is consistent with the RPP and the achievement of the NGO (see [1491] of the draft decision). See: ERA, *Access Arrangement Revision Proposal: Response to ERA Draft Decision (Confidential)*, February 2016, page 151-154.

⁴ National Gas Rules, rule 76.

⁵ National Gas Rules, rule 93(1)

⁶ National Gas Rules, rule 93(2)

- b) the efficient provision of pipeline services; and .
- c) the efficient use of the pipeline.”

2.2.2 The national gas objective

The NGO is the foundational reference point for decisions made by regulators under the NGL and its accompanying rules. In other words, the law requires the ERA to perform its functions and to exercise its power in a manner that will, or is likely to, contribute to the achievement of the NGO. The NGO states that:⁷

The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

The promotion of various forms of efficiency for the long term interest of consumers, as stipulated in the NGO, reflects each of the three dimensions of economic efficiency. ‘Efficiency’ is a term of art in economics and is widely accepted by economists as having three distinct dimensions, being:⁸

- **productive efficiency**, which is concerned with the means by which goods and services are produced, and is attained when production takes place with the least-cost combination of inputs;
- **allocative efficiency**, which is concerned with what is produced and for whom, and is attained when the optimal set of goods and services is produced and allocated so as to provide the maximum benefit to society; and
- **dynamic efficiency**, which is concerned with society’s capacity to achieve the efficient production and allocation of goods and services through time, in the face of changing productivity and/or technology (which reduces the cost of production and alters the optimal mix of inputs), the changing preferences of consumers (which alters the good and services that are desired the most by consumers), and the competing demands of consumers and producers in different time periods.

Each of these dimensions of efficiency is reflected in the architecture of the NGO. By way of explanation:

- the reference to efficient ‘investment in’ and ‘operation of’ natural gas services refers to the productive dimension of efficiency, ie, the NGO will be promoted if decisions made under the law promote the supply of natural gas services using the least cost combination of both capital and operating inputs;
- the reference to efficient ‘use of’ natural gas services refers to the allocative dimension of efficiency, ie, the NGO will be promoted if decisions are made that give rise to a level and structure of prices that both recover the cost of making natural gas services available and maximise the extent to which natural gas services are allocated to those consumers that derive the greatest benefit from them, so as to maximise the benefit to society; and
- the reference to efficient ‘investment in’ natural gas services and for the ‘long term’ interests of consumers refers to efficiency’s dynamic dimension, ie, the NGO will be promoted if decisions are made that balance the pursuit of productive and allocative efficiencies for current consumers with the requirement to invest for productive and allocative efficiency gains in the long term.

In economics, the pursuit of efficiency generally goes to the benefit of society as a whole, and so promoting economic efficiency does not necessarily promote the interests of consumers in particular. However, the structure of the NGO makes clear that the promotion of efficiency is ‘for the interests of consumers’, as distinct from any other particular societal interest group.

I note that the ‘interests of consumers’ does not automatically equate with reductions in the profits earned by the business, since the ability of a business to earn additional profits in the short term provides an incentive for it to seek improvements in productive efficiency. This is in the long term interests of consumers, provided

⁷ National Gas Law , section 23.

⁸ For further discussion of the dimensions of efficiency and their relation to public policy see Productivity Commission, *On efficiency and effectiveness – some definitions*, May 2013.

that such efficiency gains are ultimately reflected in the price, quality, safety, reliability or security of supply. Similarly, a reduction in profits can also have adverse implications for investment in the pipeline.

2.2.3 Economic framework for assessing the allocation of total revenue

In my opinion, and on the assumption the ERA is correct that rule 93 provides it with a discretion to allocate a portion of joint costs to services provided by means of the uncovered pipeline, the allocation of total revenue required by rule 93(2)(c) should be guided by the RPPs and the NGO. In particular, the resultant allocation of total revenue should:

- provide GGT with a reasonable opportunity to recover the efficient costs of providing reference services; and
- promote allocative, productive and dynamic efficiency for the long term interests of consumers.

I note that the ERA places similar emphasis on the first two RPPs and the NGO in its assessment of GGT's proposed allocation of total revenue between reference services and other services.⁹

⁹ ERA, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline Submitted by Goldfield Gas Transmission Pty Ltd*, 17 December 2015, para 1361 and 1362.

3. Assessment of cost allocation methodologies

In this section I first summarise GGT's proposed cost allocation approach for deriving the allocated total revenue of the covered pipeline, the reasoning underpinning the Authority's draft decision to adopt a different approach to allocating total revenue, and then provide my assessment of the two different approaches.

3.1 GGT's proposed approach

GGT's access arrangement proposal adopted a cost allocation methodology for deriving the total revenue of the covered pipeline capacity that is similar to that applying under its existing access arrangement. In particular, GGT proposes to calculate the allocated total revenue of providing the covered pipeline capacity as the building block cost of providing all GGP pipeline services, but excluding:

- the capital, operating and maintenance costs associated with the second compressor added at Paraburdoo in 2006 and compressors installed at Wyloo West and Ned's Creek in 2009; and
- the capital, operating and maintenance costs associated with the recently completed expansions for the provision of services to Rio Tinto Iron Ore and BHP Billiton Iron Ore.¹⁰

Once these costs are excluded, under GGT's proposed cost allocation approach, total revenue to be recovered from the prices for services provided by the covered pipeline is determined as the sum of:

- the return on the projected capital base of the covered pipeline;
- depreciation of the projected capital base of the covered pipeline;
- the estimated cost of corporate income tax of the covered pipeline; and
- the forecast operating and maintenance costs of the covered pipeline.

The essence of this methodology is that it deducts the additional capital and operating costs associated with the provision of the uncovered pipeline capacity from the building block costs of providing the services associated with the entire pipeline.

3.2 Authority's draft decision

I summarise below the essence of the Authority's draft decision, and its supporting considerations.

3.2.1 Summary of draft decision

The Authority's draft decision is to reject GGT's proposed cost allocation methodology and, instead, adopt an alternative methodology that involves allocating to total revenue only a proportion of the costs that are incurred jointly in providing all of the services (both covered and uncovered) made possible by the GGP. The proportion of 'joint costs' that the ERA proposes to allocate to reference services and services provided by the covered pipeline and other services provided by the uncovered pipeline is given by the relative utilisation of total (ie, both covered and uncovered) pipeline capacity.

The consequence of applying the ERA's proposed methodology is that a substantial proportion of the total costs of the GGP will be excluded from the allocated total revenue.

¹⁰ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, p 293

In explaining the basis for its decision, the Authority states that its proposed allocation of (only a proportion of) joint costs to covered services:

...must seek to minimise the allocative, productive and dynamic inefficiencies across all services provided by the GGP in its entirety. It follows then that the CAM should take into account any efficiency trade-offs between covered and uncovered services.¹¹

Further, the Authority states that GGT's proposed approach to cost allocation – which is to allocate nearly all of the joint costs to covered services would pose:

... a risk that the reference tariff determination for AA3 could be too high to be consistent with the economically efficient outcomes as broadly defined.¹²

And, in particular:

...there is a risk that the use of covered services could be dissuaded and that existing covered capacity could become, and remain, idle.¹³

Instrumental in this 'in principle' conclusion is the Authority's reference to the empirical context, in the form of a statement made by GGT as to the difficulty experienced at the time of preparing its access arrangement of finding a user for capacity made available by the failure of a particular gold miner. On this basis, the Authority concludes that:

Given the risk of covered capacity becoming, and remaining, idle over the life of AA3, the Authority determines that only a share of the joint costs should be allocated to covered services in order to ensure that the reference tariff more closely represents the efficient costs of those services, consistent with the RPP and achievement of the NGO.¹⁴

In making its determination, the Authority recognises that:¹⁵

- GGT may be required to bear a share of the joint costs (that it has determined should not be part of the allocated total revenue for covered services) that were previously borne by the reference tariff for covered services; and
- its decision may lead to higher tariffs for uncovered services in the future; and
- further, there is a risk to the efficiency of uncovered services in the future.

However, the Authority plays down these risks on the basis that:

The incremental costs of providing additional services on an existing pipeline with surplus capacity are likely to be substantially lower than for a pipeline that is operating at capacity.¹⁶

and so, in consequence:

¹¹ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1486

¹² Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1487

¹³ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1488

¹⁴ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1491

¹⁵ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1492

¹⁶ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1493

...a total revenue allocation to covered services that...allocates joint costs across all services delivered by the GGP will minimise the burden of economic inefficiencies across all services provided by the GGP...¹⁷

3.2.2 Supporting submissions from BHPB and Incenta

The Authority's draft decision is assisted by a submission from BHP Billiton (BHPB) contending that the allocation of joint costs between covered and uncovered services on the basis of their relative use of the GGP is fair, is supported by economic principles, and is consistent with the NGO.

Further, BHPB contends that there are shortcomings in the conclusions drawn in an earlier report prepared by me (my earlier report), stating that:¹⁸

...prices above marginal cost (as are necessary to recover the residual cost) may encourage a user who may otherwise have used the GGP not do so, despite the value they would obtain from such use exceeding the cost of that use.

A report from Incenta, attached to BHPB's submission, also supports the notion that the sharing of 'joint costs' would promote the NGO. In particular, Incenta concludes that the sharing of joint costs would promote the NGO because:

- allocative efficiency would be enhanced because distortion to consumption is minimised;¹⁹ and
- the long term interest of consumers is promoted (by a transfer from producers to consumers), providing this did not remove the incentive for investment.²⁰

3.3 Assessment of different methodologies

In this section I provide an economic assessment of the alternative methodologies for allocating total revenue to be recovered from services provided by means of the covered pipeline, with particular emphasis on:

- the economic reasoning underpinning the Authority's draft decision; and
- the efficiency consequences of imposing a significant reduction in reference tariffs for covered services provided by GGP through imposition of the Authority's proposed cost allocation method.

By way of overarching observation, in my opinion there is little to distinguish the economic principles referred to by the Authority, Incenta or my earlier report²¹ on different potential cost allocation methodologies. Rather, the critical distinctions between the different perspectives arise in relation to the nature and extent of empirical assumptions that are made, by both the Authority and Incenta in particular.

A number of those assumptions are critical to the conclusions that can be drawn and, for this reason, I commence this section with a summary of those assumptions and the role they play in supporting the particular conclusions on which they rely.

3.3.1 Critical assumptions underpinning the draft decision

Critical assumptions underpinning the Authority's analysis include that:

¹⁷ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1493

¹⁸ BHPBilliton, Public submission in response to Goldfields Gas Transmission Pty Limited's Proposed revisions to the Goldfields Gas Pipeline Access Arrangement, 27 November 2014, p 6

¹⁹ Incenta Economic Consulting, *Cost allocation between covered and uncovered services*, November 2014, page 9

²⁰ Incenta Economic Consulting, *Cost allocation between covered and uncovered services*, November 2014, page 4

²¹ HoustonKemp Economists, *Methodology for Allocating Goldfields Gas Pipeline Costs*, June 2014

- the covered capacity of GGP is not fully utilised, and so there is a material risk of allocative inefficiency through reference tariffs that are higher than necessary acting to dissuade customers or potential customers of GGP reference services from taking up that capacity;²² and
- that the total revenue the Authority determines cannot be recovered by means of reference tariffs payable by users of the covered pipeline can either: ²³
 - > be recovered from the users of other services, without any or as significant a loss to the efficiency of those users' consumption decisions; or
 - > not be recovered from other users, but can be absorbed by GGT in the form of reduced returns, without any detriment to its incentives to invest in further capacity – a conclusion that, in turn, follows from the Authority's prior assumption that there exists spare capacity, and so investment in further CCG covered capacity is not a priority.

Critical assumptions underpinning Incenta's analysis include that:

- a capacity-based allocation of joint costs across all covered and uncovered users will result in greater allocative efficiency, because:²⁴
 - > the willingness to pay of all users can be assumed to be equal; and
 - > there will be a total efficiency gain from reducing reference tariffs – and thereby facilitating increased demand – for covered users; and/or
- to the extent the prices paid for uncovered services are not or cannot be changed, then:²⁵
 - > lower prices for the users of covered services are in the long term interests of covered users (and so the NGO is still promoted); and
 - > the correspondingly lower returns to GGT can be absorbed without any detriment to incentives for efficient investment.

Having regard to the nature and criticality of these assumptions, I set out below my analysis of the Authority's draft decision and GGP's proposed cost allocation methodology, by reference to four essential economic considerations, being:

- the implications of the reduction in prices implied by the Authority's draft decision for allocative efficiency in the use of reference services;
- the implications of the allowed total revenue implied by both GGT's and the Authority's proposed cost allocation methodology for allocative efficiency in the use of reference services;
- the implications of the potentially increased prices implied by the Authority's draft decision for allocative efficiency in the use of other services; and
- the implications of the Authority's draft decision for dynamic efficiency.

3.3.2 Implications of reduced prices for allocative efficiency in the use of reference services

The information available to me suggests that the Authority is not correct to conclude or assume that there is a material degree of surplus, covered capacity on the GGP. Rather, for all practical purposes, covered capacity on the GGP is fully contracted through to 2029, and largely contracted through to 2035.

²² Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1487-1491

²³ Economic Regulation Authority Western Australia, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 17 December 2015, para 1492-1493

²⁴ Incenta Economic Consulting, *Cost allocation between covered and uncovered services*, November 2014, page 9.

²⁵ Incenta Economic Consulting, *Cost allocation between covered and uncovered services*, November 2014, page 15.

It follows that a material change in the method for allocating total revenue to be recovered from reference tariffs during AA3 cannot promote allocative efficiency in the use of covered, reference services – because there is no different allocation of capacity that is both capable of improving economic efficiency and able to be induced by a different level of reference tariff.

Put another way, given that the pipeline is forecast to operate at, or near, capacity for the foreseeable future, there is no unmet demand that can be accommodated through lower reference tariffs. Rather, a reduction in reference tariffs is more likely to induce a dis-benefit if this were to mean that a 'marginal user' continues to use the capacity, and 'crowds out' an alternative new user²⁶ that has a higher willingness to pay.

Finally, I note that both the Authority and Incenta's conclusions as to the potential for increased allocative efficiency arising from the adoption of a different cost allocation methodology for allocating total revenue is not only predicated on the assumption that additional capacity can be made available, but also on the assumption that all users of both covered and uncovered pipeline services have the same willingness to pay for that service. Only in that circumstance can it be stated with confidence that economic efficiency will be promoted if 'joint costs' are shared evenly across all customers.

This latter assumption is unlikely to be borne out in practice. Rather, the diversity of contract sizes, lengths, and different end uses mean that it is quite possible that, even if additional covered capacity was available, different customers would have a different willingness to pay for that capacity, and so the efficiency benefits of a blanket change in tariffs cannot be assured.

3.3.3 Implications of allocated total revenue for efficiency in the use of reference services

In my earlier report, I examined whether GGT's proposed approach to allocating total revenue for the purpose of setting reference tariffs would give rise to allocative inefficiency in the use of reference services. In that report I concluded, as a matter of principle, that allocative inefficiency may arise if the total revenue to be recovered from reference services is either:²⁷

- less than the total of all costs caused by the investment in and use of the relevant services, or incremental cost of providing the service, ie, the 'lower bound' that a customer or group of customers should pay to promote allocative efficiency; or
- greater than the level at which all existing users could procure the same capacity at a lower total cost, or the standalone cost of providing the service, ie, the 'upper bound' that a customer or group of customers should pay to promote allocative efficiency.

The rationale for a cost allocation process that delivers reference tariffs with a total expected revenue between these lower and upper bounds is that:²⁸

- if revenue from reference tariffs is insufficient to recover all costs caused by the provision and use of the relevant service, then future expansions in capacity will not occur even if users are willing to pay more than all the costs associated with the expansion of pipeline capacity; whereas
- alternatively, if reference tariffs exceed the level at which existing users could procure the same service from an alternative provider but at a lower total cost, then this risks an inefficient outcome since alternative pipeline capacity may be developed that would have as its sole function the bypassing or drawing of users away from the existing capacity.

The approach to allocating total revenue proposed by GGT and the ERA both involve allocating costs to reference services that are directly attributable to these services as well as an allocation of 'joint costs' to

²⁶ I note that a potential new user is at liberty to approach an existing user and come to a private agreement to acquire capacity that is already under contract to GGP.

²⁷ HoustonKemp Economists, *Methodology for Allocating Goldfields Gas Pipeline Costs*, June 2014, page 6.

²⁸ HoustonKemp Economists, *Methodology for Allocating Goldfields Gas Pipeline Costs*, June 2014, page 6.

reference services. This gives rise to a total revenue expected to be recovered from reference services that is no less than the 'lower bound' I identify above.

Similarly, both methodologies allocate costs to reference services that are directly attributable to these services, and allocate no more than the total 'joint costs' to reference services. This gives rise to a total revenue expected to be recovered from reference services that is no greater than the 'upper bound'.

3.3.4 Implications of increased prices for allocative efficiency in the use of other services

The change from the current circumstance proposed by the Authority gives rise to the potential for increases in the price at which uncovered pipeline services are made available to users, and thereby involves a risk of allocative inefficiency. On the other hand, the absence of any material degree of spare, covered capacity means that it is not possible for a reduction in reference tariffs to bring about an improvement in the allocative efficiency of covered services.

In particular, the circumstance implied by the ERA draft decision, under which 'joint costs' need to be recovered from users or potential users of services provided by the means of the uncovered pipeline, risks compromising allocative efficiency in the use of those services. Such allocative inefficiency would arise in the form of lower demand for uncovered services at the higher, joint cost-inclusive tariff, so that some available other capacity may become idle.

3.3.5 Implications for dynamic efficiency

A necessary condition for GGT to undertake any new investment is that it be sufficiently satisfied that the cost of that investment can be recovered, including through the earning of a reasonable rate of return. The current regulatory arrangements establish a framework under which GGT can recover any new investment in common assets and assets directly attributable to the reference service, unaffected by the extent to which it may also be able to meet any demand for uncovered services.

For uncovered services, GGT is able to negotiate with potential users so that it is satisfied its expected revenue will cover the incremental cost of providing those services. In other words, the current framework ensures GGT has an incentive to invest by providing the means by which the relevant incremental costs – but not any other costs – can reasonably be expected to be recovered.

A change in the method for allocating total revenues would mean that some 'joint costs' would either:

- need to be recovered from users of the uncovered pipeline; or
- not be recovered at all.

Looking forward, the extent to which these costs may be able to be passed on to existing or future users of other services is unclear. Uncertainty in the potential for recovery of joint costs would reduce GGT's incentive to undertake new investments, particularly in relation to 'shared assets'. Put another way, if the approach to allocating total revenues means that GGT is only able to recover a certain proportion of its cost when investing in 'shared assets' – and the remainder would need to be recovered from other users, for which there may be no mechanisms to do so – GGT's incentive to invest will be compromised.

Finally, by allocating a share of 'joint costs' to the uncovered pipeline, GGT would be precluded from setting tariffs by reference to the incremental costs of any future, uncovered pipeline capacity. This means that some efficient potential future investments in uncovered pipeline capacity may not proceed, particularly in circumstances where those investments are only worthwhile at a tariff for that capacity set at, or close to, its incremental cost.

4. Conclusion

By way of summary and conclusion of the above analysis, I set out below my answer to the particular questions asked of me by G+T, in the order in which they appear.

1. Whether GGT's approach to allocating total revenue is consistent with the national gas objective. That is, do you agree with the ERA's observation that a reference tariff determination based on the standalone costs of providing services by means of the covered pipeline is an "unacceptable" outcome (see [1466]-[1467] of the Draft Decision) by reference to the national gas objective.

GGT's proposed approach to allocating total revenue is consistent with the NGO. I explain in section 3.3.3 that GGT's proposed approach gives rise to an allocated total revenue for reference services that lies between the 'lower' and 'upper' bounds for allocative efficiency. Put another way, the total revenue expected to be recovered from reference services lies between the incremental cost of providing those services and the standalone cost of providing those services.

Further, I explain in section 3.3.2 that, in the absence of any material degree of spare, covered GGP capacity, allocative efficiency across users and potential users of covered and uncovered services cannot be improved through the allocation of a lower amount of total revenue for reference services. It follows that I disagree with the ERA's observation that a reference tariff determined by reference to the standalone cost of providing services by means of the covered pipeline cost is an 'unacceptable' outcome.

2. Whether a cost allocation approach that results in reference tariffs being based on the standalone cost of providing pipeline services using the Covered Pipeline best achieves the national gas objective. That is, and assuming that the ERA is correct to find that the NGR provide the ERA with a discretion to allocate total revenue either towards (or away from) services provided by means of the Covered Pipeline (see [1475] of the Draft Decision), do you agree with the ERA's conclusion that the ERA's proposed cost allocation will "minimise the burden of economic inefficiencies", in particular relative to GGT's proposed cost allocation (see [1493] of the Draft Decision).

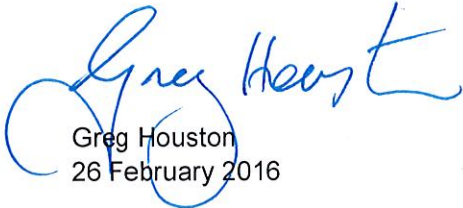
GGT's proposed approach to cost allocation best achieves the NGO. For the reasons I explain in my response to question 1 and in section 3.3.3, a cost allocation approach that gave rise to total revenue that exceeded the standalone cost of providing reference services would lead to allocative inefficiency.

In contrast, a cost allocation approach – such as that proposed by the ERA – that reduced the amount expected to be recovered from reference services would have a detrimental effect on efficiency because:

- for the reasons I explain in section 3.3.2 and also in response to question 1, such an approach cannot increase allocative efficiency, while a potential reduction in the returns to GGT would be detrimental to its incentive to invest in further capacity expansions, thereby reducing dynamic efficiency;
- the uncertainty and variability as to the costs that would need to be recovered from users of uncovered capacity would likely be detrimental the long term demand for such capacity by users and potential users; and
- by precluding GGT from setting tariffs by reference to the incremental cost of any future, uncovered pipeline capacity, some efficient potential investments may not proceed, particularly those that are only worthwhile if the tariff for that capacity is set at, or close to, incremental cost.

5. Declaration

In accordance with the CM7 Guidelines, I confirm that I have made all inquiries that I believe are desirable and appropriate, and that no matters of significance that I regard as relevant have, to my knowledge, been withheld from the Court.



Greg Houston
26 February 2016

Annexure A – Letter of instruction



Partner Luke Woodward
Contact Geoff Petersen
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gpetersen@gtlaw.com.au
Our ref LXW:GCP:1022111



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23 February 2016

By email

Mr Greg Houston
Partner
HoustonKemp Economists
Email greg.houston@houstonkemp.com

Confidential and privileged

Dear Mr Houston

Goldfields Gas Pipeline Access Arrangement Review - ERA draft decision re cost allocation

We act for Goldfields Gas Transmission Pty Ltd (**GGT**), the operator of the Goldfields Gas Pipeline (**GGP**). We are currently advising GGT in relation to the access arrangement review for the GGP being conducted by the Economic Regulation Authority (**ERA**).

Background

The GGP was constructed in the 1990s to deliver natural gas from offshore gas fields in the north west of Western Australia to inland mining regions.

The GGP (as constructed) became a “covered pipeline” under section 1.1 of the Gas Code from the date of commencement of the code. The Gas Code described the covered pipeline by reference its route, length and diameter at the time.¹ On the commencement of the National Gas Law (**NGL**), the GGP, insofar as it was a covered pipeline under the Gas Code, was deemed to be a covered pipeline under the NGL.²

When the pipeline was completed in 1996 it incorporated two compressor stations. A further compressor was installed in 2000 – 2001 at Wiluna and another at Paraburdoo in 2003 - 2004. The capacity served by these four compressors (a total of 109 TJ / day) was treated as entirely covered capacity.

However subsequent expansions of capacity have been treated as uncovered, pursuant to the Extension/Expansion Policy in the relevant access arrangements that applied to the GGP when the expansions were undertaken. The relevant expansions that are uncovered are:

- installation of additional compressors at Paraburdoo (second compressor) in 2006, Wyloo West in 2009 and Ned’s Creek in 2009. As a result of the installation of these three compressors, the pipeline was able to transport an additional 49 TJ / day of gas. GGT elected to treat the capacity created by these expansions as uncovered capacity, as it was entitled to do under the access arrangement in place at that time;³ and

¹ Gas Code, Schedule A.

² NGL, Schedule 3, Item 6.

³ Goldfields Gas Pipeline Approved Access Arrangement (as approved by the ERA on 14 July 2005 and revised on 17 December 2008), clause 10.3.

- an expansion of capacity in the Pilbara region, including installation of four compressor units at existing compressor station sites in Yarraloola and Paraburdoo, and construction of a new compressor station at Turee Creek, between Paraburdoo and Newman. This expansion added approximately 43.3 TJ / day on capacity. GGT obtained approval from the ERA to treat the capacity created by this expansion as uncovered capacity, as it is required to do under the current access arrangement.⁴

Therefore, the GGP now includes both a covered component and an uncovered component. The covered component is the pipeline as it was prior to the 2006 and subsequent expansions (referred to below as the **Covered Pipeline**). The Covered Pipeline has capacity of approximately 102.5 TJ/day. The additional capacity that was added through the 2006 and subsequent expansions is uncovered.

In the scheme of the NGL and the National Gas Rules (**NGR**), it is the Covered Pipeline that is subject to economic regulation. Regulatory approval for an access arrangement is only required in respect of covered pipelines.⁵

In August 2014, GGT submitted its access arrangement revision proposal for the Covered Pipeline to the ERA. This access arrangement revision proposal was made in respect of the period 1 January 2015 to 31 December 2019.

On 17 December 2015, the ERA released its draft decision not to approve GGT's access arrangement proposal for the 2015-2019 period (**Draft Decision**). The Draft Decision requires GGT to submit a revised access arrangement revision proposal to the ERA by 29 January 2016. In the Draft Decision, the ERA indicated that revisions to the access arrangement are anticipated to commence on 1 July 2016. Therefore the revised access arrangement revision proposal has been made in respect of the period 1 July 2016 to 31 December 2019.

One of the elements of GGT's access arrangement revision proposal which was not approved in the Draft Decision is the proposed method for allocation of total revenue to reference services provided by means of the Covered Pipeline.

As part of its access arrangement revision proposal, GGT proposed to calculate total revenue for the purposes of determining reference tariffs as the total cost of providing pipeline services using the Covered Pipeline. Thus, under GGT's proposal, total revenue includes all costs associated with the provision of services using the Covered Pipeline, and excludes incremental capital and operating costs associated with uncovered assets. GGT proposed that total revenue be recovered in full from reference services. That is, GGT allocated 100 per cent of total revenue to reference services, based on an assumption that 100 per cent of the capacity of the Covered Pipeline is used to provide reference services.

In the Draft Decision, the ERA did not accept GGT's proposed method for allocating costs (and therefore, allocating total revenue). The ERA determined that where joint costs are currently included in the total revenue calculation under rule 76 in full, the total revenue allocation under rule 93(2)(c) should be based on relative capacity utilisation as between services provided by means of the Covered Pipeline and services provided by means of the uncovered capacity (see Draft Decision [1494]). The ERA's allocation of total revenue to reference services is set out at [1501]–[1579] of the Draft Decision.

⁴ ERA, *Notice - Application for expansion of the Goldfields Gas Pipeline to be not regulated: Determination*, 30 May 2014; ERA, *Goldfields Gas Transmission's Proposed Expansion of the Goldfields Gas Pipeline: Issues Paper*, 27 March 2014.

⁵ NGR, rule 46.

In the Draft Decision, the ERA refers to expert reports from HoustonKemp and CEG that were submitted by GGT in relation to this issue, and an expert report from Incenta that was submitted by BHP Billiton.

Although it is not clear from the Draft Decision, the ERA appears to conclude that:

- a reference tariff determination based on a total revenue amount that includes all of the costs that are directly attributable to the provision of services provided by means of a covered pipeline as well as the joint costs that are incurred in the provision of all services (including services provided by means of uncovered capacity),
- without any adjustment to allocate some of those joint costs away from reference services,

would be an unacceptable outcome.⁶

That is, the ERA appears to conclude that a reference tariff determination that is based on the standalone costs of providing services by means of a covered pipeline, is inconsistent with the national gas objective.

The national gas objective is set out in section 23 of the National Gas Law, as follows:

The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

In considering the approach to the allocation of costs to reference services as submitted by GGT, the ERA noted that it considers that the approach is one that would involve a “risk that the reference tariff determination for AA3 could be too high to be consistent with economically efficient outcomes as broadly defined”.⁷ The ERA considers that a consequence of a reference tariff calculated in this way would create a risk that the “use of covered services could be dissuaded and that existing covered capacity could become, and remain, idle”.⁸ In light of the ERA’s finding that there is a risk of covered capacity becoming and remaining idle over the life of the forthcoming access arrangement period, the ERA determines that only a share of the joint costs should be allocated to covered services:⁹

...in order to ensure that the reference tariff more closely reflects the efficient cost of those services, consistent with the RPP [revenue and pricing principles] and the achievement of the NGO [national gas objective].

The ERA concludes that a total revenue allocation to covered services that allocates joint costs across all services provided by the GGP will “minimise the burden of economic inefficiencies across all services provided by the GGP in its entirety”, particularly when compared to the “burden of economic inefficiencies” the ERA considers arise from GGT’s proposed approach.¹⁰

⁶ Draft Decision, [1466]-[1468].

⁷ Draft Decision, [1487].

⁸ Draft Decision, [1488].

⁹ Draft Decision, [1491].

¹⁰ Draft Decision, [1493].

Scope of work

We are seeking a further expert report from you, setting out your expert opinion in relation to the following matters:

- 1 Whether GGT's approach to allocating total revenue is consistent with the national gas objective. That is, do you agree with the ERA's observation that a reference tariff determination based on the standalone costs of providing services by means of the covered pipeline is an "unacceptable" outcome (see [1466]-[1467] of the Draft Decision) by reference to the national gas objective.
- 2 Whether a cost allocation approach that results in reference tariffs being based on the stand-alone cost of providing pipeline services using the Covered Pipeline best achieves the national gas objective. That is, and assuming that the ERA is correct to find that the NGR provide the ERA with a discretion to allocate total revenue either towards (or away from) services provided by means of the Covered Pipeline (see [1475] of the Draft Decision), do you agree with the ERA's conclusion that the ERA's proposed cost allocation will "minimise the burden of economic inefficiencies", in particular relative to GGT's proposed cost allocation (see [1493] of the Draft Decision).

Your responses to each of the above questions should be based on your expertise as an economist, the information contained in the Draft Decision and GGT's access arrangement proposal, and the additional information provided by us.

Information to be provided by us

Copies of the GGT access arrangement proposal and the NGR are publicly available. However if you would like us to provide copies of these documents, please let us know.

We will provide you with a confidential version of the Draft Decision.

To the extent that you require further information from us or GGT, please contact us and we will endeavour to provide this.

Guidelines for preparing advice

The Guidelines for Expert Witness in the Federal Court of Australia are attached to this letter. GGT is seeking a rigorously prepared independent view which may be used in the context of regulatory decision making and in any subsequent review of the ERA's final decision. Therefore you are requested to follow the Guidelines to the extent reasonably possible.

In particular, as part of any report please:

- (a) identify your relevant area of expertise and provide a curriculum vitae setting out the details of that expertise;
- (b) only address matters that are within your expertise;
- (c) where you have used factual or data inputs please identify those inputs and the sources;
- (d) if you make assumptions, please identify them as such and confirm that they are in your opinion reasonable assumptions to make;

- (e) if you undertake empirical work, please identify and explain the methods used by you in a manner that is accessible to a person not expert in your field;
- (f) confirm that you have made all the inquiries that you believe are desirable and appropriate and that no matters of significance that you regard as relevant have, to your knowledge, been withheld from your report; and
- (g) please do not provide legal advocacy or argument and please do not use an argumentative tone.

Timing

We require a final report by 25 February 2016.

If you have any questions, please do not hesitate to contact us.

Yours sincerely

Gilbert + Tobin

Luke Woodward

Partner

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Geoff Petersen

Lawyer

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gpetersen@gtlaw.com.au

Attachment: Federal Court guidelines for expert witnesses

Practice Note CM 7: Expert witnesses in proceedings in the Federal Court of Australia

Guidelines

1. General Duty to the Court¹¹
 - 1.1 An expert witness has an overriding duty to assist the Court on matters relevant to the expert's area of expertise.
 - 1.2 An expert witness is not an advocate for a party even when giving testimony that is necessarily evaluative rather than inferential.
 - 1.3 An expert witness's paramount duty is to the Court and not to the person retaining the expert.
2. The Form of the Expert's Report¹²
 - 2.1 An expert's written report must comply with Rule 23.13 and therefore must
 - (a) be signed by the expert who prepared the report; and
 - (b) contain an acknowledgement at the beginning of the report that the expert has read, understood and complied with the Practice Note; and
 - (c) contain particulars of the training, study or experience by which the expert has acquired specialised knowledge; and
 - (d) identify the questions that the expert was asked to address; and
 - (e) set out separately each of the factual findings or assumptions on which the expert's opinion is based; and
 - (f) set out separately from the factual findings or assumptions each of the expert's opinions; and
 - (g) set out the reasons for each of the expert's opinions; and
 - (ga) contain an acknowledgment that the expert's opinions are based wholly or substantially on the specialised knowledge mentioned in paragraph (c) above¹³; and
 - (h) comply with the Practice Note.
 - 2.2 At the end of the report the expert should declare that "[the expert] has made all the inquiries that [the expert] believes are desirable and appropriate and that no matters of significance that [the expert] regards as relevant have, to [the expert's] knowledge, been withheld from the Court."

¹¹The "*Ikarian Reefer*" (1993) 20 FSR 563 at 565-566.

¹²Rule 23.13.

¹³See also *Dasreef Pty Limited v Nawaf Hawchar* [2011] HCA 21.

2.3 There should be included in or attached to the report the documents and other materials that the expert has been instructed to consider.

2.4 If, after exchange of reports or at any other stage, an expert witness changes the expert's opinion, having read another expert's report or for any other reason, the change should be communicated as soon as practicable (through the party's lawyers) to each party to whom the expert witness's report has been provided and, when appropriate, to the Court¹⁴.

2.5 If an expert's opinion is not fully researched because the expert considers that insufficient data are available, or for any other reason, this must be stated with an indication that the opinion is no more than a provisional one. Where an expert witness who has prepared a report believes that it may be incomplete or inaccurate without some qualification, that qualification must be stated in the report.

2.6 The expert should make it clear if a particular question or issue falls outside the relevant field of expertise.

2.7 Where an expert's report refers to photographs, plans, calculations, analyses, measurements, survey reports or other extrinsic matter, these must be provided to the opposite party at the same time as the exchange of reports¹⁵.

3. Experts' Conference

3.1 If experts retained by the parties meet at the direction of the Court, it would be improper for an expert to be given, or to accept, instructions not to reach agreement. If, at a meeting directed by the Court, the experts cannot reach agreement about matters of expert opinion, they should specify their reasons for being unable to do so.

J L B ALLSOP
Chief Justice
4 June 2013

¹⁴ The *"Ikarian Reefer"* [1993] 20 FSR 563 at 565

¹⁵ The *"Ikarian Reefer"* [1993] 20 FSR 563 at 565-566. See also Ormrod *"Scientific Evidence in Court"* [1968] Crim LR 240

Annexure B – Curriculum vitae



Greg Houston

Partner

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Overview

Greg Houston is a founding partner of the firm of expert economists, HoustonKemp. He 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 has directed a wide range of financial, competition and regulatory economics assignments during this consulting career. 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. On competition and antitrust matters he 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. Greg also has deep experience of infrastructure access regulation matters, and intellectual property and damages valuation. In his securities and finance work Greg has advised clients on a large number of securities class actions, as well as market manipulation and insider trading proceedings, and on cost of capital estimation.

Greg's industry experience spans the aviation, beverages, building products, cement, e-commerce, electricity and gas, forest products, grains, medical waste, mining, payments networks, office products, 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.

Greg was until April 2014 a Director of the global firm of consulting economists, NERA Economic Consulting, where for twelve years he served on its United States' Board of Directors, for five years on its global Management Committee and for sixteen years as head of its Australian operations.

Greg also serves on the Competition and Consumer Committee of the Law Council of Australia.

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

| | |
|-----------|--|
| 2014- | HoustonKemp Economists Partner, Sydney, Australia |
| 1989-2014 | NERA Economic Consulting Director (1998-2014) London, United Kingdom (1989-1997) Sydney, Australia (1998-2014) |
| 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 Experience¹

Competition and Mergers

| | |
|---------|---|
| 2015 | King & Wood Mallesons/Confidential Client Competition analysis Analysis and advice in the context of the ACCC's inquiry into Eastern and Southern Australia wholesale gas prices. |
| 2015 | Corrs/Confidential Client Merger clearance Analysis, advice and expert report submitted to the ACCC in the context of a proposed acquisition in the office products sector. |
| 2014-15 | Australian Government Solicitor/Commonwealth of Australia Competition and trade analysis Expert report on competition and trade in tobacco products, prepared in the context of the World Trade Organisation dispute settlement proceedings concerning Australia's tobacco plain packaging legislation. |
| 2014-15 | King & Wood Mallesons/Confidential Client Competitive effects of agreement Analysis and advice prepared in context of an ACCC investigation of agreements between a supplier and its major customers that are alleged to harm competition. |
| 2014-15 | Ashurst/Confidential Client Competitive effects of agreement Analysis and advice prepared in context of an ACCC investigation of agreements between a supplier and its major customers that are alleged to harm competition. |
| 2013-14 | Corrs/Australian Competition and Consumer Commission Effect of cartel conduct Expert report on the price effects of an alleged market sharing arrangement in relation to the supply of forklift gas, prepared in the context of Federal Court proceedings brought against Renegade Gas (Supagas). |

¹ Past ten years only.

- 2013-14** **Australian Competition and Consumer Commission**
Merger clearance
Expert report and testimony before the Competition Tribunal in the context of the ACCC's decision to oppose the acquisition of Macquarie Generation by AGL Energy.
- 2013-14** **Ashurst/BlueScope**
Merger clearance
Expert reports submitted to the ACCC in the context of the clearance of three approved transactions in the domestic steel industry.
- 2013-14** **Australian Government Solicitor/ACCC**
Merger clearance
Analysis and advice prepared in the context of the ACCC's review of the proposed acquisition by of petrol retailing sites in South Australia.
- 2012-13** **Minter Ellison/Confidential Client**
Merger clearance
Expert reports submitted to the ACCC in the context of a confidential application for clearance of a proposed acquisition in the industrial gases industry.
- 2011-12** **Gilbert + Tobin/Pact Group**
Merger clearance
Expert reports submitted to the ACCC on the competitive implications of the proposed acquisition of plastic packaging manufacturer Viscount Plastics by Pact Group.
- 2010-12** **Mallesons/APA**
Merger clearance
Expert reports submitted to the ACCC on the competitive implications of the proposed acquisition of the gas pipeline assets of Hastings Diversified Utilities Fund by APA Group.
- 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 agreement
Expert report prepared for the State of Victoria on the effects of certain restrictions applying to the trading of water rights on inter-state trade in the context of a constitutional challenge brought against the state of Victoria by the state of South Australia.
- 2009-11** **Arnold + Porter/Visa Inc, Mastercard Inc and others**
Payment card markets
Expert reports and deposition testimony on behalf of defendants in the United States Re Payment Card Interchange Fee and Merchant Discount Antitrust Litigation, on the effects of regulatory interventions in the Australian payment cards sector.

- 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.
- 2009-10** **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.
- 2008-10** **Allens Arthur Robinson/Amcors**
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.
- 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.
- 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** **Australian Competition and Consumer Commission**
Exemption from access undertaking
'Peer review' report of the ACCC's draft decision on applications by Telstra for exemption from its standard access obligations (SAOs) for the supply by resale of the local carriage service (LCS) and wholesale line rental (WLR) in 387 exchange service areas in metropolitan Australia.
- 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
- 2007-08** **Australian Energy Market Commission**
Wholesale market 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.
- 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.
- 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.

Regulatory Analysis

- 2015** **Government of New South Wales**
Economic regulation for privatisation
Advisor to government of New South Wales on all economic regulatory aspects of the proposed partial lease the electricity transmission and distribution entities, TransGrid, AusGrid and Endeavour Energy.
- 2015** **ActewAGL**
Regulatory price review
Expert report on the economic interpretation of provisions in the national electricity law and rules in relation to the application of the national electricity objective to the entire price determination of the Australian Energy Regulator.
- 2014-15** **Atco Gas**
Access price review
Expert reports on the economic interpretation of provisions in the national gas law and rules in relation to depreciation and the application of the national gas objective to the entire draft decision, submitted to the Economic Regulation Authority of WA.
- 2014-15** **Government of Victoria**
Economic regulation for privatisation
Advisor to government of Victoria on the economic regulation of the Port of Melbourne Corporation in the context of the proposed privatization of the port by way of long term lease.

- 2013** **Actew Corporation**
Interpretation of economic terms
Advice on economic aspects of the draft and final decisions of the Independent Competition and Regulatory Commission in relation to the price controls applying to Actew.
- 2012-13** **Gilbert + Tobin/Rio Tinto Coal Australia**
Price review arbitration
Analysis and expert reports prepared in the context of an arbitration concerning the price to be charged for use of the coal loading facilities at Abbott Point Coal Terminal.
- 2012-13** **Ashurst/Brisbane Airport Corporation**
Draft access undertaking
Advice, analysis and expert reports in the context of the preparation of a draft access undertaking specifying the basis for determining a ten year price path for landing charges necessary to finance a new parallel runway at Brisbane airport.
- 2012** **King & Wood Mallesons/Origin Energy**
Interpretation of economic terms
Expert reports and testimony in the context of judicial review proceedings before the Supreme Court of Queensland on the electricity retail price determination of the Queensland Competition Authority.
- 2012** **Contact Energy, New Zealand**
Transmission pricing methodology
Advice on reforms to the Transmission Pricing Methodology proposed by Electricity Authority.
- 2011-12** **Energy Networks Association**
Network pricing rules
Advice and expert reports submitted to the Australian Energy Market Commission 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.
- 2010-12** **QR National**
Regulatory and competition matters
Advisor on the competition and regulatory matters, including: a range of potential structural options arising in the context of the privatisation of QR National's coal and freight haulage businesses, particularly those arising in the context of a 'club ownership model' proposed by a group of major coal mine owners; and an assessment of competitive implications of proposed reforms to access charges for use of the electrified network.
- 2002-12** **Orion New Zealand Ltd, New Zealand**
Electricity lines regulation
Advisor on 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.

- 2011** **Meridian Energy, New Zealand**
Undesirable trading situation
Advice to Meridian Energy on the economic interpretation and implications of the New Zealand electricity rule provisions that define an 'undesirable trading situation' in the wholesale electricity market.
- 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**
Arbital 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.
- 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.
- 1999-2004,**
2010-11 **Sydney Airports Corporation**
Aeronautical pricing notification
Wide ranging advice on regulatory matters. This includes advice and expert reports in relation to SACL's notification to the ACCC of substantial reforms to aeronautical charges at Sydney Airport 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.
- 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.
- 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.
- 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.
- 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** **Minister for Industry**
Expert Panel
Appointment by Hon Ian Macfarlane, 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.

- 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.
- 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.

Securities and Finance

- 2015** **O'Donnell Legal/Representative proceeding**
Misleading and deceptive conduct
Expert report submitted to the Federal Court assessing the effect of alleged misstatements in relation to the annual accounts and associated going concern assumption in relation to Tamaya Resources Ltd (in liquidation).
- 2013-15** **Sydney Water Corporation**
Cost of capital estimation
Preparation of three expert reports for submission to the Independent Pricing and Regulatory Tribunal (IPART) on the framework for determining the weighted average cost of capital for infrastructure service providers, and on estimation of an appropriate equity beta.
- 2012-15** **HWL Ebsworth/Confidential client**
Insider trading
Expert advice and analysis in the context of criminal proceedings alleging insider trading in certain ASX-listed securities (2012-13). Subsequent expert report filed in Supreme Court of Tasmania estimating price effects of inside information in context of subsequent 'proceeds of crime' proceedings.

- 2014** **Wotton Kearney/Genesys Wealth Advisors**
Misleading and deceptive conduct
Expert report submitted to the Supreme Court of Victoria assessing the accuracy of product disclosure statements and other information in relation to two fixed interest investment funds offered by Basis Capital.
- 2014** **TransGrid**
Cost of capital estimation
Preparation of an expert report for submission to the Australian Energy Regulator (AER) estimating the weighted average cost of capital for electricity network service providers.
- 2011-13** **Slater & Gordon/Modtech**
Shareholder damages assessment
Expert reports and testimony in representative proceedings before the Federal Court alleging misstatement and/or breach of the continuous disclosure obligations of the ASX-listed entity, GPT.
- 2011-12** **Freehills/National Australia Bank**
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.
- 2012** **Johnson Winter & Slattery/Victorian gas distributors**
Cost of equity estimation
Expert report submitted to the AER on the appropriate methodology for estimating the cost of equity under the Capital Asset Pricing Model.
- 2009-13** **Minter Ellison/Confidential client**
Misleading and deceptive conduct
Expert report and related advice 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 includes the extent to which the investment risks were adequately described in the fund documents, and the quantum of any potential damages arising.
- 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.
- 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** **Maurice Blackburn/Confidential client**
Shareholder damages assessment
Analysis prepare 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 Energy 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**
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 ASX-listed entity, Credit Corp.
- 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.
- 2008-09** **Clayton Utz/Fortescue Metals Group**
Materiality of share price response
Preparation of expert report and testimony before 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 Properties**
Shareholder damages assessment
Assistance in the estimation of potential damages arising in representative proceedings concerning accounting misstatements and/or breach of the continuous disclosure obligations of an ASX-listed entity.
- 2008** **Slater & Gordon/Boyd**
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 EDI Downer.
- 2007-08** **Maurice Blackburn/Watson**
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.

- 2006-07** **Maurice Blackburn/Dorajay**
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.

Valuation and Contract Analysis

- 2014-15** **Minter Ellison/Foxtel Management Pty Ltd**
Assessment of reasonable licence fee
Expert reports prepared in the context of proceedings before the Copyright Tribunal concerning the appropriate valuation of the rights to be paid by Foxtel for the broadcast and communication of commercial recordings licensed by the Phonographic Performance Company of Australia.
- 2014-15** **Rahmat Lim & Partners/Port Dickson Power Berhad**
Power purchase agreement arbitration
Expert reports submitted in the context of an international arbitration held in Kuala Lumpur concerning the interpretation of the price indexation provisions in a power purchase contract between Port Dickson Power Berhad and Tenaga Nasional Berhad.
- 2013** **Johnson Winter & Slattery/Origin**
Gas supply agreement price review
Analysis and advice on the implications of certain contract terms for the price of gas, to be determined in a potential arbitration concerning the terms of a substantial long term gas supply agreement.
- 2013** **Herbert Smith Freehills/Santos**
Gas supply agreement price review
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.
- 2012-13** **Herbert Smith Freehills/North West Shelf Gas**
Gas supply agreement arbitration
Expert reports on the implications of certain contract terms for the price of gas under a substantial long term gas supply agreement.
- 2012-13** **Allens/BHP Billiton-Esso**
Gas supply agreement arbitration
Analysis, advice and expert report on the implications of certain contract terms for the price of gas under a substantial long term gas supply agreement.
- 2012** **King & Wood Mallesons/Ausgrid**
Power purchase agreement arbitration
Expert report prepared and filed in an arbitration on the in relation to the effect of the government's newly introduced carbon pricing mechanism on the price to be paid under a long term power purchase and hedge agreement between an electricity generator and retailer.

- 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 price review
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.
- 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
Advise on economic aspects of the operation of the east Australian wholesale gas market in the context of the potential development of coal seam gas for use in LNG production and export.
- 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.
- 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.

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.

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.

Sworn Testimony, Transcribed Evidence²

- 2015** **Expert evidence before an arbitral tribunal on behalf of Port Dickson Power Berhad (PDP), in the matter of PDP v Tenaga Nasional Berhad (TNB)**
Expert reports, sworn evidence, Kuala Lumpur, 28 January 2015
- 2014** **Expert evidence before a UNCITRAL arbitral tribunal on behalf of Maynilad Water Corporation Inc (MWCI), in the matter of MWCI v Metropolitan Waterworks and Sewerage System (MWSS)**
Expert reports, sworn evidence, Sydney (by videolink to Manila), 31 August 2014
- Expert evidence before the Australian Competition Tribunal on behalf of the ACCC, in the matter of AGL Energy v ACCC**
Expert reports, sworn evidence, Sydney, 10-11 June 2014
- 2013** **Expert evidence before the Supreme Court of Victoria on behalf of Maddingley Brown Coal in the matter of Maddingley Brown Coal v Environment Protection Agency of Victoria**
Expert reports, sworn evidence, Melbourne, 12 August 2013
- Expert evidence before the Federal Court on behalf of Modtech v GPT Management and Others**
Expert reports, sworn evidence, Melbourne, 27 March 2013
- 2012** **Expert evidence before the Supreme Court of Queensland on behalf of Origin Energy Electricity Ltd and Others v Queensland Competition Authority and Others**
Expert reports, sworn evidence, Brisbane, 3 December 2012
- 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 Energy 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

² Past ten years only.

- 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
- 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

Expert evidence on behalf of Orion NZ, at the Commerce Commission's Conference on the ODV Handbook for electricity lines businesses

Transcribed evidence, public hearings, Wellington, 26 April 2004

Speeches and Publications³

2015

Electricity Networks Association Regulation Seminar, Brisbane

Participant in Expert Plenary Panel

Speech, Brisbane, 5 August 2015

NZ Commerce Commission Input Methodologies Review, Wellington

'Allocation of Risk' and 'New Technologies'

Panel Discussant, Wellington, 29 July 2015

Competition Matters Conference, Wellington

Disruptive Technologies

Chair, Discussion Panel, Sydney, 24 July 2015

Singapore Aviation Academy, Singapore

Private Financing of Airport Infrastructure Expansions

Speech, Singapore, 5 March 2015

GCR 4th Annual Law Leaders Forum Asia-Pacific

Differences in using economics in EU and Asia Pacific

Speech, Singapore, 5 March 2015

AEMC Public Forum

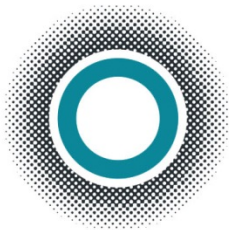
East Coast Gas Market Review

Speech, Sydney, 25 February 2015

³ Past seven years

- 2014**
- Competition and Consumer Workshop, Law Council of Australia**
An Economist's Take on Taking Advantage
Paper and Speech, Brisbane, 14 September 2014
- Energy Networks 2014**
Innovation and Economic Regulation
Speech, Melbourne, 1 May 2014
- The Network Industries Quarterly, *Consumer Advocacy in Australian Regulatory Decision Making – 'Hard Choices Await'*, Vol. 16, No 1, 2014**
Ecole Polytechnique Federale de Lausanne, 31 March 2014
- GCR 3rd Annual Law Leaders Asia Pacific**
Role of Economists in Competition Law Enforcement in Asia-Pacific
Speech, Singapore, 6 March 2014
- 2013**
- University of South Australia – Competition and Consumer Workshop**
Empirical test and collusive behaviour
Speech and participation game, Adelaide, 16 November 2013
- Energy in WA Conference**
Capacity Payments in the WEM – Time to Switch?
Panel Discussion, Perth, 21 August 2013
- ACCC/AER Regulatory Conference**
Designing Customer Engagement
Speech, Brisbane, 25 July 2013
- Victorian Reinsurance Discussion Group**
Australian Mining – When Opportunities and Risk Collide
Speech, Melbourne, 1 March 2013
- NZ Downstream Conference**
Investment and Regulation
Panel Discussion, Auckland, 25 July 2013
- 2012**
- Rising Stars Competition Law Workshop**
Expert Evidence in Competition Cases
Speech, Sydney, 24 November 2012
- KPPU – Workshop on the Economics of Merger Analysis**
Theories and Methods for Measuring the Competitive Effects of Mergers
Speech, Bali, 19-21 November 2012
- University of South Australia – Competition and Consumer Workshop**
Reflections on Part IIIA of the Competition Act
Speech, Adelaide, 12 October 2012
- NZ Downstream Conference**
Lines company consolidation – what are the benefits and risks?
Panel discussion, Auckland, 6-7 March 2012
- 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
Speeches, Auckland and Wellington, 15-16 November 2010
- 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**
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