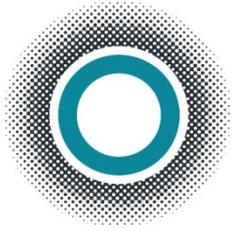


Evaluation of Economic Regulation Authority's Draft Decision against the National Gas Objective, Greg Houston, HoustonKemp, 26 November 2014

Appendix 1.1

27 November 2014

Response to the ERA's Draft Decision on required
amendments to the Access Arrangement for the Mid-
West and South-West Gas Distribution System



HOUSTONKEMP
Economists

Economic Review of ERA's Draft Decision

A report for Johnson Winter & Slattery

27 November 2014

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1. Introduction

I have been asked by Johnson Winter & Slattery (JWS) to prepare this report on behalf of ATCO Gas Australia Pty Ltd (ATCO Gas).

JWS has asked that I undertake a review of the 14 October 2014 draft decision (the draft decision) of the Economic Regulation Authority of Western Australia (ERA) in relation to the revisions to the gas access arrangement for the Mid-West and South West Gas Distribution System, as proposed by ATCO Gas (revised access arrangement) in March 2014. The proposed revised access arrangement is to apply for the period July 2014 to December 2019, and is to be evaluated under the relevant provisions of the National Gas Law (NGL) and National Gas Rules (NGR or the rules).

1.1 Scope of report

The essential focus of the review I have been asked to undertake is the economic reasoning that underpins the ERA's draft decision, both as a whole and in relation to its various constituent components, assessed by reference to the national gas objective (NGO). It is not the purpose of my review to address in a detailed manner the individual elements of the draft decision. Indeed, ATCO Gas has separately commissioned a number of experts to review various matters arising in constituent components of the draft decision, and the reports prepared by those experts have been made available to me in order to prepare this report.

Rather, my report assesses the extent to which various components of the draft decision satisfy the requirement that, where there are two or more possible decisions, the ERA must make the one that will or is likely to contribute to the achievement of the NGO to the greatest possible degree. In making this assessment I have also been asked to identify and evaluate the manner in which any constituent components of the draft decision relate to each other and the extent to which that relationship has been taken into account by the ERA. Finally, I have also been asked whether the errors identified by the various experts from which ATCO Gas has sought opinions, if corrected, would or would be likely to result in a material preferable decision in terms of achievement of the NGO.

JWS's instructions are attached as Annexure A to my report.

1.2 Qualifications

I am a founding Partner of the economic consulting firm, HoustonKemp. Over a period of 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 on a wide range of regulatory, competition and financial economics assignments.

My industry sector experience spans aviation, beverages, building products, e-commerce, electricity and gas, grains, insurance, medical waste, mining, payments networks, 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 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 late 2005 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 gas objective, which was to be included in the national gas law as then being drafted for consideration by commonwealth and state lawmakers. This role followed advice

prepared by that same group of experts in 2004, on the appropriate specification of a national electricity objective, for inclusion in the then proposed national electricity law.

Separately, in December 2005 I was appointed to an expert panel convened by the 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 and gas network 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.

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 6.

I have been assisted in the preparation of this report by my Sydney-based colleagues, Dale Yeats, Luke Wainscoat and Henry McMillan. Notwithstanding this assistance, the opinions in this report are my own, and I take full responsibility for them.

1.3 Structure of report

I have structured the remainder of my report as follows:

- in section 2 I summarise the essential requirements governing decision-making under the national gas law and rules, and the questions that JWS has asked me to address in relation to the ERA's draft decision;
- in section 3 I discuss the economic role of the NGO, the principles that should be adopted in a regulatory regime that promotes that NGO, and the role of the building blocks approach in meeting those objectives;
- in section 4 I present my assessment of the ERA's draft decision and provide my opinion on whether, having regards to a number of expert report that I have reviewed, the ERA has meet the contribution to NGO requirement;
- in section 5 I present my analysis of the 'third issue' that JWS has asked me to address, being whether, if the identified errors were to be corrected, this would be likely to result in a materially preferable designed NGO decision, overall; and
- finally, section 6 contains my declaration, in accordance with the Guidelines.

2. Context and Purpose of Report

By way of background, it is helpful to summarise the context for the ERA's draft decision, the essential requirements that govern decision making under the national gas law and rules, and the particular questions that I have been asked to address in assessing the draft decision.

Necessarily, the summary I set out below is a condensation of that provided in JWS's instructions to me.¹ To the extent there may be differences between my summary of the arrangements governing the ERA's draft decision and that set out below, I confirm that I have taken JWS's instructions as providing definitive guidance.

2.1 National gas objective

The national gas objective or NGO forms a foundational reference point for decisions made by regulators under the NGL and its accompanying rules. The NGO states that:

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, reliability and security of supply of natural gas.

I explain my understanding of the NGO in section 3. For the purpose of this context-setting part of my report, it is important to note that the final decision that the ERA is to make in relation to the revised access arrangement proposed by ATCO Gas is a 'designated reviewable regulatory decision'.² Further, by nature of the rules that govern the ERA's review of the revised access arrangement, such a decision includes a number of constituent components.

2.2 NGO reference point for ERA decision-making

The significance of the designated nature of the ERA's decision and the fact of its constituent components is that, in making its final decision, certain requirements fall to be met by the ERA. These are that the ERA must:

- perform or exercise that function or power in a manner that will or is likely to contribute to the achievement of the NGO; and
- specify the manner in which the constituent components of the decision relate to each other; and
- the manner in which that relationship has been taken into account in the making of the decision.

Further, where there are two or more possible designated decisions that could be made, the ERA is required:

- to make the one that the ERA is satisfied will contribute to the achievement of the NGO to the greatest possible degree; and
- to specify the reasons for the basis of that satisfaction.

Finally, on any merits review of the ERA's final decision, the Australian Competition Tribunal is only entitled to vary or set that final decision aside if it is satisfied that to do so will, or is likely to, result in a (modified) decision that is 'materially preferable' in terms of contributing to the national gas objective.

¹ JWS, letter to Greg Houston, 27 November 2014.

² JWS, letter to Greg Houston, 27 November 2014, page 1.

2.3 Scope and purpose of report

Against this background, I have been asked by JWS to review both the ERA's draft decision and a series of expert reports on various aspects of the draft decision, with particular attention to errors identified by each expert. In light of that review, I have then been asked to explain and/or to provide my opinion on a number of generic and specific matters arising in relation the NGO and elements of the rules that govern the assessment of a proposed revised access arrangement.

2.3.1 Question 1

The particular, generic questions on which I have been asked to provide my opinion are:

- my understanding of the requirements of the NGO, as well as the revenue and pricing principles
- the principles that should be adopted in a regulatory regime that promotes the NGO requirement, including the way in which the revenue and pricing principles in section 24 (together, the principles) may be relevant;
- the role of the building blocks under the rules, and their concordance (or otherwise) with the NGO and the principles; and
- the basis on which a failure to comply with either the principles or rules is likely to result in a failure to meet the NGO requirement.

I address these questions in section 3 of my report.

I have also been asked to explain and/or provide my opinion on a number of questions arising directly from the ERA's draft decision. In particular, I have been asked:

- to indicate the extent to which the ERA has adequately specified the manner in which the constituent components of the decision relate to each other and, as applicable, the manner in which that interrelationship has been taken into account;
- to summarise any aspects of the ERA's draft decision that, as identified in the expert reports I have reviewed, suggest that one or more of the rules I discuss above have been offended;
- to summarise each material constituent component of the draft decision and its economic impact on the business of ATCO Gas over the regulatory period; and
- to opine on whether, having regard to all of the material to which I refer above, the ERA has met the NGO requirement.

I address this set of questions in section 4 of my report.

2.3.2 Questions 2 and 3

Drawing on this framework of considerations and analysis, JWS has also asked two further substantive questions. These are to assess whether, in my opinion:

- if replicated in its final decision, the ERA will have met the requirement that, if two or more regulatory decisions could be made, it must make the one that contributes to the NGO to the greatest possible degree (the 'preferable designated reviewable regulatory decision requirement'); and
- if the identified errors were to be corrected, and having regard to all other relevant considerations, this would be likely to result in a materially preferable designed NGO decision, overall.

I address these questions in section 5 of my report.

3. NGO and Principles for its Promotion

In this section, I address the generic issues arising in the first substantive set of questions that I identify in section 2.3.1, ie, those concerning the economic role of the NGO, the principles that should be adopted in a regulatory regime that promotes the NGO, and the role of the building blocks under the rules in meeting those objectives.

3.1 National gas objective

I noted in section 2.2 that the national gas objective or NGO is the foundational reference point for decisions made by regulators under the NGL and its accompanying rules. The NGO states that:

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 my opinion, the fundamental architecture of the NGO has been developed on an economic foundation. I draw this conclusion because, as specified:

- the NGO explicitly identifies the promotion of efficiency (of 'investment in', 'operation' and 'use of' natural gas services) as its foundational objective; and
- none of the following items referenced as being the focus of the NGO serve to compromise its efficiency objective.

Rather, as I explain below, the references to such efficiency being 'for the long term interests of consumers..' and then 'with respect to..' a number specified dimensions of a natural gas service serve to clarify:

- the ultimate beneficiary of such efficiency, ie, consumers;
- the relevant timeframe over which the efficiency objective should be interpreted, ie, the long term; and
- the particular dimensions of natural gas services to which the efficiency objective should be directed, ie, quality, safety, reliability and security of supply.

In the following sub-sections I explain the concept of economic efficiency and the guidance that is given by the clarifying phrases embedded in the NGO, each of which gives emphasis to particular dimensions of this foundational, economic concept.

3.1.1 Dimensions of efficiency

'Efficiency' is a term of art in economics and is widely accepted by economists as having three distinct dimensions. These dimensions are:

- 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 over time, in the face of changing productivity and/or technology (which reduces the cost of production and alters the optimal mix of inputs), and the changing preferences of consumers, which alters the good and services that are desired the most by consumers.

Each of these dimensions of efficiency is recognised by 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 NGL 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 consumers are able to purchase them at prices no greater than the utility they derive from using natural gas services; and
- the reference to efficiency in 'investment in' and for the 'long term' interests of consumers refers to its dynamic dimension, ie, the NGO will be promoted if decisions are made that give greater weight to long term productive and allocative efficiency considerations, as distinct from immediate or near term efficiency outcomes.

The reference to the 'long term' interests of consumers and the reduced emphasis it implies for short term considerations underlines that the application of frameworks for economic regulation involves the need to make trade-offs between competing objectives. By way of example, the potential for short and long term efficiency objectives to be in tension with each other arises when a decision that may have the effect of increasing short term allocative efficiency (such as, by forcing a substantial reduction in consumer prices), is not consistent with the achievement of long term productive or allocative efficiency – because it threatens the sustainability of a service provider's operations or its efficient future investment plans.

To summarise, the NGO is structured so as to encapsulate all three dimensions of efficiency that are familiar to economists, ie, productive, allocative and dynamic. As a matter of principle, efficiency can be assessed in both static (at a particular point in time) and dynamic terms (over the future course of time). However, by its reference to the 'long term' interests of consumers, the NGO is structured so as to clarify that the balance of emphasis is to be given to the long term, dynamic dimension of efficiency.

3.1.2 Long term interests of consumers

The NGO specifies that the promotion of efficiency is 'for the long term interests of consumers of natural gas'. I discussed above the significance of the reference to 'long term'; however, the particular reference to the 'interests of consumers' also bears explanation.

In economics, the pursuit of efficiency generally falls to the benefit of society as a whole. However, some potentially narrower specifications of efficiency may not achieve this result. The best such example arises in circumstances where the benefits of enhancements to the productive efficiency of a firm are captured wholly by the firm itself – in the form of higher profits for its owners. In this circumstance, the promotion of productive efficiency outcomes would be 'for the...interests of producers'.

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. Although this specific reference to the interests of consumers is a helpful reinforcement, the reference earlier in the structure of the NGO to efficiency in the 'use of' natural gas services also ensures that the promotion of efficiency is to be consistent with the interests of consumers.

It is also helpful to note that, by virtue of the reference within the NGO to the interests of 'consumers', as distinct from customers (say, of any particular provider of natural gas services), the NGO requires consideration of parties who may not necessarily be a customer of one or other natural gas service provider at present, but whom are potential consumers by virtue of the making available of natural gas services that meet the needs of a (new) customer at some future date.

3.1.3 Price, quality, safety, reliability and security of supply of natural gas.

Finally, the NGO specifies that the relevant interests of consumers are those that encompass 'price, quality, safety, reliability and security of supply of natural gas'.

Each of these considerations comprise the various, typical attributes of a natural gas service. To the extent they reflect informed preferences of consumers, these attributes might be taken as reinforcing the reference earlier in the structure of the NGO to the 'use of' natural gas services, and so to allocative efficiency. However, the existence of such a list of attributes confirms that the NGO is not concerned with the promotion or consideration of matters that fall outside these typical, narrowly defined attributes of a natural gas service. By way of an example to the contrary, the NGO does not permit its efficiency focus to be broadened so as to encompass external costs and benefits of the use of natural gas services, such as its effect on carbon dioxide emissions, native wildlife, or individual customer hardship.

3.1.4 Conclusion

Drawing together the various elements of the NGO, I observe that its fundamental architecture is of an economic nature. The NGO is structured so as to clarify that it is concerned with promoting all three forms of efficiency, and that the balance of emphasis is to be given to longer term, dynamic efficiency considerations.

The NGO reinforces that efficiency is to be promoted for the long term interests of consumers, and that these interests encompass the typical attributes of a natural gas service, but not matters that go to the wider interests of society.

3.2 Principles necessary for promotion of the NGO

The administrative determination of maximum prices for the provision of an infrastructure-based service involving a substantial degree of market power – such as the services provided by covered natural gas pipelines – involves striking the right balance between two forms of potential inefficiency. These inefficiencies arise as compared with those attained when prices are determined in a market where competition is effective, and involve choices between:

- attaining greater productive efficiency, the pursuit of which is compromised by the poor incentives created when regulation seeks to eliminate each and every opportunity for a service provider to benefit (in the form of temporarily higher profits) from improved cost efficiency; and
- attaining greater short term allocative efficiency, by seeking to ensure that prices reflect as closely as possible the efficient cost of supply.

By reason of this essential trade-off, a regulatory framework that has the objective of promoting the NGO must encompass three core principles, ie:

- the service provider must have reasonable assurance that costs efficiently incurred – including a return on its capital costs – will be recovered over the life of the investment;
- consumers must be protected from the ability and incentive of the service provider to raise prices above the cost of supply in a substantial or sustained manner; and
- incentive mechanisms must be put in place that allow the service provider to retain some of the benefit of any improvements in efficiency that it achieves.

The revenue and pricing principles set out in section 24 of the NGL together reflect each of these well understood economic principles. The principle that a service provide must have a reasonable assurance that it efficient costs will be recovered is reflected more or less directly in section 24(2), which states that:

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.

This principle is supplemented by sections 24(5) and (4) of the NGL, which recognise the need for an appropriate return on capital, and for past values of that capital to be recognised in future price setting processes, thereby offering assurance that costs will be recovered over future time.

The protection of consumers is recognised through the existence of processes for establishing reference tariffs, which establish the maximum price that is to be paid for a specified, reference services.

The requirement for incentive mechanisms is also explicitly recognised, in section 24(3), which states that:

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

Two additional revenue and pricing principles (being those set out at section 24(6) and (7)) reflect the existence of the trade-off between productive and allocative efficiency that I identify above and, in effect, allow consideration of the wider costs and risks or under/over investment and under/over use of pipeline services when making that assessment.

3.3 Building block approach reflects these principles

Rule 76 requires the application of a 'building block approach' to determine the total revenue to be derived by a provider of natural gas in each regulatory year, whereby the building blocks are:³

- (a) a return on the projected capital base for the year;
- (b) depreciation on the projected capital base for the year;
- (c) the estimated cost of corporate income tax for the year;
- (d) increments or decrements for the year resulting from the operation of an incentive mechanism to encourage gains in efficiency; and
- (e) a forecast of operating expenditure for the year.

Taking the total revenue amount determined for each regulatory year, rule 92(2) provides for the determination of reference tariffs that can be expected to recover that total revenue, providing forecast demand has been established as a best estimate of that variable, as required by rule 74.

I highlight below the principal means by which the building block approach, applied in accordance with NGR, is consistent with the principles required to further the achievement of the NGO.

3.3.1 The projected capital base

The building block approach involves determining a projected capital base, to which a rate of return is applied so as to calculate the return on the capital base, as well as depreciation. The projected capital base comprises two essential elements, being:

- the incorporation of capital expenditure incurred in the earlier access arrangement period, subject to its prudence and efficiency – thereby establishing the opening capital base; and

³ NGR, rule 76.

- a forecast of future conforming capital expenditure, which itself is derived by reference to – among other considerations – a forecast of the future demand for reference services.

The rules calculate the opening capital base in a manner that guarantees the recovery of capital expenditure previously incorporate into the capital base notwithstanding whether, in hindsight, that capital expenditure may have turned out to be efficient.⁴ This promotes economic efficiency in two ways, ie:

- it provides certainty to investors, and so encourages investment, which promotes dynamic and allocative efficiency; and
- it reduces the expected risk associated with investment, which reduces capital costs and promotes productive efficiency.

The rules also require the projected capital base to include only capital expenditure that would be incurred by a prudent service provider acting efficiently to achieve the lowest sustainable cost of providing services.⁵ It follows that the projected capital base component of the building block approach:

- promotes productive efficiency by ensuring services are produced at the lowest sustainable cost;
- promotes productive allocative efficiency by ensuring capital expenditure forecasts are subject to regulatory by reference to the criteria of prudence and efficiency, thereby avoiding the cost of over-investment; and
- promotes allocative efficiency by ensuring prices in a given regulatory year reflect only efficient capital expenditure in that year.

3.3.2 The return on capital

The building block approach requires the determination of the return on capital in each regulatory year by multiplying the allowed rate of return by the projected capital base in the respective year. Further, the rules require the allowed rate of return:⁶

to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the service provider in respect of the provision of reference services

It follows that by deriving the return on capital in accordance with the rules, application of this element of the building block approach:

- provides assurance to investors that they will derive a return on investment commensurate with those of a similar degree of risk, which encourages ongoing investment in network infrastructure and so promotes dynamic efficiency;
- contains measures to prevent investors from deriving excessive rates of return, which promotes allocative and productive efficiency.

3.3.3 Depreciation

The depreciation building block is calculated in each regulatory year by reference to the projected capital base for that year, and acts to return capital to investors. The rules governing the determination of the depreciation building block require:

- the depreciation schedule to give effect to a time profile of reference tariffs that promotes efficient growth in the market for reference services, which promotes allocative efficiency;⁷

⁴ NGR, rule 77

⁵ NGR, rule 78, 79 and 80

⁶ NGR, rule 87(2)(3).

⁷ NGR, rule 89(1)(a).

- that depreciation be recovered over an asset's life not to exceed the initial value of that asset, which promotes allocative and productive efficiency;⁸ and
- that the recovery of capital expenditure be spread over the economic life of the asset to which that expenditure relates, thereby promoting allocative and dynamic efficiency.⁹

3.3.4 The estimated cost of corporate income tax

The building block approach includes an explicit allowance for the recovery of the cost of corporate income tax. This building block is calculated in a manner that promotes efficiency by:

- providing assurance to investors that they will be able to recover the cost of income tax, which promotes allocative efficiency;
- reducing the estimated cost of income tax by the assumed value of imputation credits, which ensures investors are not overcompensated and so promotes allocative and productive efficiency; and
- calculating the corporate tax allowance by reference to the corporate tax payable that would be payable by a benchmark efficient entity, which encourages efficient tax management and so promotes dynamic efficiency.

3.3.5 Incentive mechanism to encourage efficiency improvements

The existence of a separate building block for 'increments or decrements resulting from an incentive mechanism to encourage gains in efficiency' explicitly recognises the importance of providing incentives for efficiency in the application of economic regulation. Moreover, this building block enables a regulator to offer service providers financial incentives to improve all three dimensions of economic efficiency and, indeed, for a service provider to be financially penalised for inefficiency.

3.3.6 Operating Expenditure

The remaining building block requires the determination of an allowance for operating expenditure equal to that which:¹⁰

'...would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.'

The means by which this building block promotes the NGO are:

- by providing reasonable assurance that operating costs – efficiently incurred – will be able to be recovered, thereby promoting allocative and productive efficiency; and
- by encouraging service providers only to incur operating expenditure that is efficient, thereby providing services at the lowest sustainable cost, which promotes productive efficiency.

3.3.7 Summary

By definition, the essential architecture of the building block approach, ie, the derivation of forecast total revenue as the sum of a service provider's expected costs, provides reasonable assurance as to the ability of a service provider to recover those costs, thereby providing for ongoing investment and the promotion of dynamic efficiency.

Further, each building block element draws reference – whether directly or through other, constituent elements of the rules – to the need for such costs to be those of a service provider acting efficiently and prudently, including through the operation of incentive arrangements designed to achieve such outcomes.

⁸ NGR, rule 89(1)(d).

⁹ NGR, rule 89(1)(b).

¹⁰ NGR, rule 91(1).

This aspect of the building block approach is designed to ensure that the rules framework operates for the long term benefit of users, consistent with both allocative and dynamic efficiency.

3.4 Building block approach and pricing principles necessary for NGO

Taken together the building block approach and the revenue and pricing principles amount to the essential elements of a framework of economic regulation that is capable of achieving the NGO. Failure to give effect to each and every building block, and to comply with each of the main revenue and pricing principles (with the possible exception of 24(6) and 24(7)), will compromise the achievement of the NGO requirement.

4. Assessment of ERA's Draft Decision

In this section I present my assessment of certain aspects of the ERA's draft decision and, in particular:

- indicate the extent to which the ERA has adequately specified the manner in which the constituent components of the decision relate to each other and, as applicable, the manner in which that interrelationship has been taken into account;
- summarise those elements of the ERA's draft decision that, as identified in the expert reports I have reviewed, suggest that aspects of the rules I discuss above have been offended;
- summarise each material constituent component of the draft decision and its economic impact on the business of ATCO Gas over the regulatory period; and
- provide my opinion on whether, having regard to all of the material to which I refer above, the ERA has met the contribution to NGO requirement.

I also set out my opinion on whether, if replicated in its final decision, the ERA will have met the requirement that, if two or more regulatory decisions could be made, it must make the one that contributes to the NGO to the greatest possible degree (the 'preferable designated reviewable regulatory decision requirement').

4.1 Introduction

ATCO Gas has separately commissioned a number of experts to review various matters arising in constituent components of the draft decision. The reports prepared by those experts have been made available to me in order to prepare this report. Table 1 below lists the constituent components of the draft decision addressed by the expert reports made available to me, the corresponding expert and cost building block to which each expert report relates.

By way of reference, the building blocks specified at rule 76 are:

- (a) a return on the projected capital base for the year;
- (b) depreciation on the projected capital base for the year;
- (c) the estimated cost of corporate income tax for the year;
- (d) increments or decrements for the year resulting from the operation of an incentive mechanism to encourage gains in efficiency; and
- (e) a forecast of operating expenditure for the year.

Table 1 Constituent components of the draft decision and corresponding building block or blocks

Component of the draft decision	Corresponding Building Block(s)
Cost of debt	Return on the capital base (a)
Cost of equity	Return on the capital base (a)
Gamma	Return on the capital base (a) Cost of corporate income tax (c)
Corporate support operating expenditure	Forecast operating expenditure (e)
Depreciation	Depreciation on the capital base (b)
IT operating expenditure	Forecast operating expenditure (e)
Technical capex and operating expenditure	Forecast operating expenditure (e) Return on the capital base (a) Depreciation on the capital base (b)
Operating and capital expenditure benchmarking	Forecast operating expenditure (e)
Review of operating expenditure forecasts	Forecast operating expenditure (e)
Tax depreciation	Corporate income tax (c)
Business development and marketing operating expenditure	Forecast operating expenditure (e)
Demand forecasts	Forecast operating expenditure (e) Return on the capital base (a) Depreciation on the capital base (b)

I have been provided reviewed the expert report(s) pertaining to each of the constituent components of the draft decision that I list in Table 1 and, in the following sections, set out my interpretation of each of these expert opinions, as relevant to the 'contribution to the NGO requirement', identified in my instructions.

In so doing, I summarise and draw upon any interrelationships between the constituent components of the draft decision identified by the other experts or myself.

4.2 Cost of Equity

An expert report by SFG assesses the approach and methodology adopted in the draft decision to estimate the cost of equity, as relevant to determining the 'return on the projected capital base' building block.¹¹

SFG identifies a number of errors in the draft decision, which I summarise in Table 2 below by reference to the relevant aspects of ATCO's revised proposal and the ERA's draft decision, along with the salient features of the expert opinion provided by SFG.

¹¹ SFG, *The required return on equity: Response to ATCO Gas Draft Decision*, November 2014.

Table 2 Summary of matters relevant to estimating the cost of equity

Cost of Equity	
ATCO's revised proposal	<ul style="list-style-type: none"> • Estimates the cost of equity to be 10.51 per cent.¹² • A number of financial models used to estimate the cost of equity, ie:¹³ <ul style="list-style-type: none"> > the Black CAPM (10.41 per cent) > the Sharpe-Lintner CAPM (9.8 per cent) > the Fama-French three factor model (10.64 per cent) > a dividend growth model (10.76 per cent)
ERA's Draft Decision	<ul style="list-style-type: none"> • Estimates the cost of equity to be 6.8 per cent.¹⁴ • Directly apply only the Sharpe-Lintner CAPM to estimate the cost of equity.¹⁵ • Market risk premium (MRP) of 5.5 per cent¹⁶ • Equity beta of 0.7¹⁷ • Proxy for the risk free rate is the yield on 5 year Commonwealth Government Securities (CGS)¹⁸ (2.95 per cent)
Expert Opinion	<ul style="list-style-type: none"> • Estimates the cost of equity to be 10.51 per cent, by reference to four financial models:¹⁹ • ERA has erred in disregarding models other than the SL CAPM.²⁰ • The ERA applies the SL CAPM incorrectly because: <ul style="list-style-type: none"> > too small a sample is used estimate the equity beta – best estimate is 0.82²¹ > the MRP estimate incorporates a number of errors²² – SFG propose 7.61 per cent.²³ > Proxy for a risk free rate should be the 10 year yield on CGS, ie, 5.58 per cent.²⁴

SFG explains that the methodological errors made by the ERA when estimating the cost of equity give rise to an estimate that is materially lower than SFG's best estimate. Indeed, the ERA's estimate of the cost of equity is approximately one third less than that calculated by SFG.

Calculating the return on capital building block using an estimate of the cost of equity with substantial downward bias will undercompensate investors, given the perceived level of risk. In section 3.3.2, I explain

¹² ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 201

¹³ *Op cit*, page 200 and 201.

¹⁴ Economic Regulation Authority of Western Australia, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014,, paragraph 758.

¹⁵ *Op cit*, paragraph 663.

¹⁶ *Op cit*, paragraph 733.

¹⁷ *Op cit*, paragraph 743.

¹⁸ *Op cit*, paragraph 763 and 764.

¹⁹ SFG, *The required return on equity: Response to ATCO Gas Draft Decision*, November 2014, page 73.

²⁰ SFG, *The required return on equity: Response to ATCO Gas Draft Decision*, November 2014, page 2.

²¹ *Op cit*, page 17 to 18.

²² *Op cit*, page 40 to 41.

²³ *Op cit*, page 41.

²⁴ *Op cit*, page 56 to 57.

the importance of providing investors with a return commensurate with the perceived level of risk. Further, the rules explicitly require the allowed rate of return:²⁵

... to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the service provider in respect of the provision of reference services

In the alternative, underproviding for the cost of equity will discourage ongoing investment in network infrastructure and will:

- not promote dynamic efficiency;
- not promote allocative efficiency; and
- not be in the long term interests of consumers of natural gas.

In my opinion the ERA's approach to estimating the cost of equity and its resulting estimate, does not meet the contribution to the NGO requirement. My opinion is consistent with that of SFG, who concludes that:

'...the ERA's current estimate of the allowed return on equity is not the best possible estimate. It then follows that the ERA has not produced "the best possible estimate of the benchmark efficient financing costs" as required... in the Allowed Rate of Return Objective. It also follows... that the ERA's allowed return will not achieve the NGO or RPP.'

Similarly, SFG also states that:

'... the ERA's estimate of the required return on equity is based on a number of errors and that correction of those errors would lead to a materially preferable estimate of the allowed return on equity that is more consistent with the ARORO, NGO and RPP.'

4.3 Cost of Debt

An expert report prepared by CEG assesses the approach and methodology used by the ERA to estimate the cost of debt, as it relates to determining the 'return on the projected capital base' building block.²⁶

CEG identifies a number of errors in the draft decision, which I summarise in Table 3 below by reference to the relevant aspects of ATCO's revised proposal and the ERA's draft decision, alongside salient features of CEG's report.

²⁵ NGR, rule 87(2)(3).

²⁶ CEG, *Cost of debt consistent with the NGR and NGL*, November 2014.

Table 3 Summary of matters relevant to estimating the cost of debt

Cost of Debt	
ATCO's revised proposal	<ul style="list-style-type: none"> Estimate the cost of debt using the hybrid approach described by CEG.²⁷
ERA's Draft Decision	<ul style="list-style-type: none"> Update estimate annually to reflect changes to the estimate of the debt risk premium (DRP).²⁸ The debt risk premium to be the lower of that estimated by:²⁹ <ul style="list-style-type: none"> the term spread approach – adding the 10 year DRP to the 5 year risk free rate and 10 - 5 year term spread (this would be consistent with ATCO's proposal) the swaps approach – adding the 10 year DRP to the 5 year risk free rate and 10 to 5 year swap costs.
Expert Opinion	<ul style="list-style-type: none"> The ERA choose the lower of two mutually exclusive debt management strategies and so does not comply with rule 87(3).³⁰ Updating the estimate annually is not compliant with the requirements of the rules and NGL.³¹ The two methodologies used by the ERA to estimate the DRP incorporate a number of errors, ie:³² <ul style="list-style-type: none"> Correctly estimating the term spread approach and the swap approach, respectively, results in estimates of 5.58 per cent and 7.93 per cent; while The ERA's approach gives estimates of 5.11 per cent and 5.59 per cent.

CEG identifies a fundamental error of the ERA as being that it assumes a debt portfolio of a benchmark - efficient firm with similar risk to ATCO Gas, comprising ten years' staggered debt, but also assumes that this can be rolled over annually. These assumptions are not reconcilable, nor replicable by an efficient benchmark firm. ATCO/CEG's proposed estimation methodology is, in contrast, replicable by an efficient benchmark firm and, in my opinion, consistent with rule 87.

By proposing a methodology that is not replicable for the reasons CEG explain, the ERA's methodology for estimating the return on debt will result in estimates that are materially different from the efficient debt financing costs of a benchmark efficient entity. It follows that the ERA's methodology for estimating the cost of debt does not comply with the requirements of rule 87(3) and so will neither promote allocative nor dynamic efficiency and will not be in the long term interest of consumers of natural gas.

In my opinion the ERA's methodology for estimating the cost of debt does not meet the contribution to the NGO requirement. Similarly, CEG explains that promoting the allowed rate of return objective defined in rule 87(3) promotes the NGO and concludes that correcting the ERA's methodological errors will:³³

'...materially improve the achievement of the ARORO and, consequently, the NGO and the RPP. On this basis I consider that correcting this error (by compensating based on a well-defined debt

²⁷ *Op cit*, paragraph 3, 55 and 69.

²⁸ *Op cit*, page 202.

²⁹ *Op cit*, page 200 and 201.

³⁰ CEG, *Cost of debt consistent with the NGR and NGL*, November 2014, page 5 and 6.

³¹ *Op cit*, page 26 to 27.

³² *Op cit*, page 2.

³³ *Op cit*, page 90.

management strategy that a benchmark efficient entity could reasonably be assumed to undertake) would materially promote the NGO.'

4.4 Gamma

An expert report prepared by SFG assesses the approach and methodology used to determine the value of imputation credits to investors, ie, gamma.³⁴ Gamma is an input in the calculation of 'the cost of corporate income tax' building block and 'the return on capital base' building block.

SFG identify errors in the ERA's estimation of gamma; namely in relation to its estimation of the utilisation rate of imputation credits, ie, theta, which is an input in the calculation of gamma. I describe in Table 4 the contentions of ATCO Gas and the ERA and summarise the relevant aspects of the expert opinion provided by SFG.

Table 4 Summary of matters relevant to determining gamma

Gamma	
ATCO's revised proposal	<ul style="list-style-type: none"> ● Value of imputation credits to be set at 0.25 on the basis of:³⁵ <ul style="list-style-type: none"> > a distribution rate of 0.7 > a theta of 0.35
ERA's Draft Decision	<ul style="list-style-type: none"> ● Value of imputation credits to be set at 0.5 on the basis of ³⁶ <ul style="list-style-type: none"> > a distribution rate of 0.7.³⁷ > a utilisation rate (theta) of 0.7³⁸ ● The ERA estimates theta giving primary consideration to:³⁹ <ul style="list-style-type: none"> > the 'equity ownership' approach (theta of 0.7); and > the 'taxation statistics' approach (theta of 0.4 to 0.8) and > having regard to the 'conceptual goal posts' approach (theta of 0.6 to 1).
Expert Opinion	<ul style="list-style-type: none"> ● The evidence that is currently available supports a distribution rate estimate of 70%.⁴⁰ ● The ERA has erred in interpreting theta to be the redemption rate, which has led it to disregard dividend drop-off analysis when estimating theta.⁴¹ ● The ERA has adopted a redemption estimate of theta rather than a value estimate of theta, whereas gamma should properly be estimated as the <i>value</i> of imputation credits because:⁴² <ul style="list-style-type: none"> > if shareholders do not value a \$1 imputation credit at \$(gamma), they will not receive an appropriate return

³⁴ SFG, *Estimating gamma: Response to ATCO Gas Draft Decision*, November 2014.

³⁵ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, paragraph 934.

³⁶ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, October 2014, paragraph 970.

³⁷ *Op cit*, paragraph 949.

³⁸ *Op cit*, paragraph 969.

³⁹ *Op cit*, paragraph 968.

⁴⁰ SFG, *Estimating gamma: Response to ATCO Gas Draft Decision*, November 2014, page 1.

⁴¹ *Op cit*, page 41.

⁴² *Op cit*, page 2 and 3.

- > the NGR define gamma as the *value* of imputation credits
- > any reasonable analysis of the relevant literature leads to the conclusion that gamma is intended to be a measure of the value of imputation credits
- > the ERA erroneously infer that Lally (2013 AER) provides support for its approach. There is no theoretical framework that supports the ERA's proposed approach.
- The ERA should apply no weight to the Lally "conceptual goal posts test".⁴³
- The best available dividend drop-off estimate of the value of distributed imputation credits is 0.35.⁴⁴

The errors in the approach to estimating gamma in the ERA's draft decision lead it to conclude that the value of imputation credits to investors is greater than is otherwise indicated by more robust methods. In consequence, the ERA's approach assumes shareholders place greater value on imputation credits, as compared with the true value of imputation credits, and will therefore undercompensate investors for the cost of corporate income tax.

By not allowing investors to recover the cost of corporate income tax the ERA will discourage ongoing investment in network infrastructure, which will:

- not promote dynamic efficiency;
- not promote allocative efficiency; and
- will not be in the long term interests of consumers of natural gas.

In my opinion, the ERA's approach to estimating gamma, and so its calculation of the cost of corporate income tax building block, does not meet the contribution to the NGO requirement.

In a similar manner, SFG draws its conclusion by reference to the corresponding role of gamma in the calculation of the return on capital, and so the return on capital building block, and concludes that:⁴⁵

'... the ERA's current estimate of theta is not the best estimate possible in the circumstances. Indeed it is not even an estimate of theta – it is an estimate of the redemption rate, which is a different concept entirely. It then follows that the ERA has not produced "the best possible estimate of the benchmark efficient financing costs" as required by the AEMC above and in the Allowed Rate of Return Objective. It also follows... that the ERA's allowed return will not achieve the NGO or RPP.'

4.5 Depreciation

I was engaged by JWS to prepare a separate report addressing the ERA's draft decision as to the methodology used to calculate the depreciation on the capital base in each year.

In Table 5 I summarise the distinguishing features of ATCO Gas and the ERA's approach to setting the depreciation schedule in each year and set out my opinion whether and/or to what extent different approaches comply with the requirements of the rules.

⁴³ *Op cit*, page 5.

⁴⁴ *Op cit*, page 4

⁴⁵ *Op cit*, page 57.

Table 5 Summary of matters relevant to determining depreciation

Depreciation	
ATCO's revised proposal	<ul style="list-style-type: none"> • Transition to a capital base that is not indexed for the effect of consumer price inflation (CPI).⁴⁶ <ul style="list-style-type: none"> > Apply straight line depreciation to the unindexed capital base.
ERA's Draft Decision	<ul style="list-style-type: none"> • Time profile of reference tariffs under ATCO's approach do not comply with rule 89(1)(a).⁴⁷ • Apply straight line depreciation to a capital base that is indexed for CPI. • Time profile of reference tariffs under ERA approach complies with rule 89(1).⁴⁸
Expert Opinion	<ul style="list-style-type: none"> • The ERA incorrectly remove an amount for inflationary gain from the return on capital building block, rather than the depreciation building block.⁴⁹ • The analysis underpinning the ERA's conclusion as to compliance with rule 89(1)(a) contains error.⁵⁰ • Correcting the ERA's analysis shows that ATCO's proposed transition approach better meets the requirements of rule 89(1)(a), as compared with the ERA's approach.⁵¹ • Straight line depreciation with an unindexed capital base meets the requirements of rule 89(1)(a), whereas indexed straight line depreciation does not.⁵²

ATCO Gas and the ERA's approaches are equivalent in present value terms and so do not affect the long term recovery of costs. However, each approach gives rise to a different time profile of reference tariffs. Rule 89(1)(a) requires that the depreciation schedule be designed so that reference tariffs vary over time in a way that promotes efficient growth in the market for reference services.

By its nature, the criterion established by rule 89(1)(a) promotes the objectives of long term investment efficiency and efficient use of network infrastructure. By selecting a depreciation schedule that does not comply with rule 89(1)(a), the ERA's draft decision:

- does not promote efficient investment in natural gas services; and
- does not promote efficient use of natural gas services.

By means of these inefficiencies, the ERA's draft decision as to the methodology used to determine the depreciation schedule in each year does not meet the contribution to the NGO requirement.

⁴⁶ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 223.

⁴⁷ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, October 2014, paragraph 1038.

⁴⁸ *Op cit*, paragraph 1029.

⁴⁹ HoustonKemp Economists, *Evaluation of ERA's Draft Decision on ATCO's Depreciation Allowance*, November 2014, page 5 and 6.

⁵⁰ *Op cit*, page 19.

⁵¹ *Op cit*, page 25 to 27.

⁵² *Op cit*, page 24.

4.6 Tax depreciation method

A report by Ernst and Young (EY) provides an expert opinion in relation to the ERA's draft decision that ATCO Gas must apply the diminishing value method to calculate tax depreciation for capital expenditure.⁵³

I summarise ATCO's revised proposal, the ERA's draft decision and EY's expert opinion in Table 6 below.

Table 6 Summary of matters relevant to tax depreciation

Tax Depreciation	
ATCO's revised proposal	<ul style="list-style-type: none"> Calculate tax depreciation using the straight line depreciation method.⁵⁴
ERA's Draft Decision	<ul style="list-style-type: none"> The diminishing value method must be used for all capital expenditure incurred post 1 July 2014.⁵⁵ The diminishing value method reflects the actions of a benchmark efficient entity.⁵⁶
Expert Opinion	<ul style="list-style-type: none"> It can't be assumed that the diminishing value method is consistent with an expected outcome for a benchmark entity.⁵⁷ ATCO Gas does not have the ability to adopt the ERA's approach for all capital expenditure.⁵⁸ The ERA's approach is not consistent with the approach applied by other Australian regulators, eg, the Australian Energy Regulator.⁵⁹ The ERA's approach may discourage improvements or alterations to existing assets.⁶⁰ ATCO Gas will suffer additional compliance burdens under the ERA's approach.⁶¹

EY concludes that the ERA's draft decision to apply the diminishing value method to all capital expenditure post 1 July 2014 may:

- not promote efficient operation of natural gas services, because it may discourage asset improvements;
- not promote efficient investment in natural gas services, ie, by not allowing cost recovery, and

It follows that the ERA's decision to apply the diminishing value method does not meet the contribution to the NGO requirement.

⁵³ EY, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, November 2014, page 2.

⁵⁴ See: ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, October 2014, paragraph 1103; and ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 227.

⁵⁵ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, October 2014, paragraph 1104.

⁵⁶ *Op cit*, paragraph 1104.

⁵⁷ EY, *Review of the regulated tax asset base for regulated revenue purposes – addendum to the report of Vaughan Lindfield*, November 2014, paragraph 16.

⁵⁸ *Op cit*, paragraph 16(e).

⁵⁹ *Op cit*, paragraph 16(f).

⁶⁰ *Op cit*, paragraph 16(g).

⁶¹ *Op cit*, paragraph 16(i).

4.7 Operating expenditure for corporate support

An expert report by KPMG assesses the forecast level of operating expenditure for corporate services in the forthcoming regulatory period, which relates to the cost building block for forecast operating expenditure.

In Table 7 below I highlight the relevant aspects of ATCO's revised proposal, the ERA's draft decision and KPMG's expert opinion.

Table 7 Summary of matters relevant to operational expenditure for corporate support

Operating expenditure for corporate support	
ATCO's revised proposal	<ul style="list-style-type: none"> Corporate support operating expenditure of \$88.1 million.⁶²
ERA's Draft Decision	<ul style="list-style-type: none"> Corporate support operating expenditure of \$69.75 million.⁶³
Expert Opinion	<ul style="list-style-type: none"> KPMG assesses ATCO's revised corporate support operating expenditure forecast of \$88.1 million. The level of ATCO's corporate support services is well within the benchmark range.⁶⁴ KPMG concludes that:⁶⁵ <ul style="list-style-type: none"> > The intercompany charges included in the corporate support service costs comprise the costs of inputs necessary to provide the corporate support services > ATCO's forecast corporate support operating expenditure is consistent with rule 91(1). > ATCO Gas allocates shared costs and other costs in accordance with rule 93(2). > TKPMG find no ground to conclude the efficient benchmark costs for corporate support services are other than \$84.7 million over the AA4 period. > ATCO's forecast exceeds the midpoint benchmark by \$3.55 million over AA4 and so only this amount is subject to regulatory judgement.

KPMG concludes that ATCO's forecast of operating expenditure for corporate support services is consistent with rule 91(1), and so is operating expenditure that:⁶⁶

'... would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services would be incurred by a prudent provider acting efficiently, in accordance with good industry.'

It follows that, by excluding expenditure that meets the criteria of rule 91(1) in the cost building block for forecast operating expenditure, the ERA's draft decision may inhibit ATCO's operations and prevent it from recovering its efficient costs. The exclusion of such forecast expenditure:

- will not promote efficient operation of natural gas services; and
- will not promote efficient investment in natural gas services.

⁶²ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 79.

⁶³ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, October 2014, page 68.

⁶⁴ KPMG, *The corporate support operating costs of the MidWest and South-West Gas Distribution Systems*, November 2014, p.4.

⁶⁵ *Op cit*, pages 4 to 6.

⁶⁶ NGR, rule 91(1).

It follows that, in my opinion, the ERA's draft decision as to operating expenditure for corporate support services does not meet the contribution to NGO requirement.

4.8 Operating expenditure for Information Technology

An expert report by KPMG assesses whether the level of operating expenditure for information technology (IT) proposed by ATCO Gas is compliant with the rules.

I summarise ACTO's revised proposal, the ERA's draft decision and KPMG's expert opinion in Table 8 below.

Table 8 Summary of matters relevant to operating expenditure for IT

Operating expenditure for IT	
ATCO's revised proposal	<ul style="list-style-type: none"> IT operating expenditure of \$57.2 million.⁶⁷
ERA's Draft Decision	<ul style="list-style-type: none"> IT operating expenditure of \$43.67 million.⁶⁸
Expert Opinion	<ul style="list-style-type: none"> With regard to the criteria governing operating expenditure in rule 91(1), KPMG find: <ul style="list-style-type: none"> > The range of IT projects and IT operating activities is consistent with those in recent network distribution businesses regulatory submissions.⁶⁹ > The level of IT operating expenditure forecast is reasonable when compared to industry benchmarks.⁷⁰ > Prudent management practices have been observed in the delivery of IT services.⁷¹ > ATCO Gas has reduced its proposed IT operating expenditure by 12% based on the new Wipro Master Services Agreement, a greater reduction than recommended by EMCa.⁷² > The rate of change proposed for IT managed services are based on reasonable business drivers.⁷³

I take KPMG's conclusion to be that ATCO's forecast level of operating expenditure for IT satisfies the criteria at rule 91(1) and, on this basis, the ERA's draft decision disallows a proportion of expenditure that would be incurred by a prudent service provider acting efficiently.

By disallowing such expenditure to be included in the calculation of the cost building block for forecast operating expenditure the ERA's draft decision:

- will not promote efficient operation of natural gas services; and

⁶⁷ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 48.

⁶⁸ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System, October 2014, paragraph 302.

⁶⁹ KPMG, *The IT Operating Expenditure of the Access Arrangement for the Mid-West and South-West Has Distribution System*, November 2014, p.13.

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

⁷² *Ibid.*

⁷³ *Ibid.*

- will not promote efficient investment in natural gas services.

On my understanding of KPMG's conclusion, the ERA's forecast of operating expenditure for IT does not meet the contribution to NGO requirement.

4.9 Operating and capital expenditure benchmarking

An expert report prepared by Acil Allen Consulting (Acil Allen) benchmarks ATCO's operating and capital expenditure relative to eight other Australian gas distributors.

Table 9 below summarises the level of operating and capital expenditure in ATCO's revised proposal, as compared with that allowed by the ERA, and sets out Acil Allen's expert opinion as to the efficiency of that expenditure relative to other Australian gas distributors.

Table 9 Summary of matters relevant to the benchmarking of operating and capital expenditure

Benchmark operating and capital expenditure	
ATCO's revised proposal	<ul style="list-style-type: none"> • Operating expenditure of \$407 million over AA4.⁷⁴ • Capital expenditure of \$592 million over AA4.⁷⁵
ERA's Draft Decision	<ul style="list-style-type: none"> • Operating expenditure of \$347 million over AA4.⁷⁶ (\$74 million rejected) • Capital expenditure of \$286 million over AA4.⁷⁷ (\$321 million rejected)
Expert Opinion	<ul style="list-style-type: none"> • Benchmark ATCO's operating and capital expenditure using a sample of Australian gas distributors.⁷⁸ • Assessment of expenditure on a per customer and per km basis is the most meaningful measure of cost efficiency in ATCO's circumstances.⁷⁹ • Analysis indicates ATCO Gas has efficient costs both over historical periods and over the AA4 period.⁸⁰ • ERA's approved level of operating expenditure in 2019 and 2014, relative to the 2013-2014 sample mean, is respectively:⁸¹ <ul style="list-style-type: none"> > 37 per cent and 31 per cent lower on a per km basis; > 41 per cent and 39 per cent lower on a per customer basis. • ERA's approved level of capital expenditure in 2019 and 2014, relative to the 2013-2014 sample mean, is respectively:⁸² <ul style="list-style-type: none"> > 68 per cent and 40 per cent lower on a per km basis > 67 per cent and 41 per cent lower on a per customer basis.

⁷⁴ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 48.

⁷⁵ *Op cit*, page 122.

⁷⁶ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014, paragraph 321.

⁷⁷ *Op cit*, paragraph 532.

⁷⁸ KPMG, *The IT Operating Expenditure of the Access Arrangement for the Mid-West and South-West Gas Distribution System*, November 2014, page iv to vi.

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

⁸² *Ibid.*

I understand Acil Allen's opinion to support the proposition that the forecast operating expenditure and capital expenditure allowance in the ERA's draft decision is inconsistent with the efficiency-focused criteria that are to be applied, respectively, at rule 91 and rule 79.

This evidence gives weight to and supports the inferences I draw from each of the other expenditure-related expert reports⁸³ made available to me; namely, that the ERA's draft decision in relation to operating and capital expenditure does not promote efficient investment in, or efficient use of, natural gas services and so does not meet the contribution to the NGO requirement.

4.10 Operating expenditure forecasts

An expert report prepared by Acil Allen examines the application in the ERA's draft decision of the 'revealed cost approach' to assessing ATCO's forecasting operating expenditure.

I summarise the relevant aspects of ATCO's revised proposal, the ERA's draft decision and Acil Allen's expert opinion in Table 10 below.

Table 10 Summary of matters relevant to operating expenditure forecasts

Forecast operating expenditure	
ATCO's revised proposal	<ul style="list-style-type: none"> Operating expenditure of \$407 million over AA4.⁸⁴
ERA's Draft Decision	<ul style="list-style-type: none"> Applied a "revealed cost" approach to assess the proposed operating expenditure (excluding UAFG and ancillary services).⁸⁵ Approved operating expenditure of \$301.05 million (excluding UAFG and ancillary services).⁸⁶ Reject ACTO's proposed escalation in labour costs of 2 per cent about CPI.⁸⁷
Expert Opinion	<ul style="list-style-type: none"> The ERA has not properly applied the revealed cost approach, because it has:⁸⁸ <ul style="list-style-type: none"> not used the most recent actual network operating expenditure as the starting point for forecasting network operating expenditure. arbitrarily capped the step changes in network operating expenditure at the proposed 2015 expenditure level. not explicitly considered the impact of growth and productivity offsets on the network operating costs, corporate support costs, business development and marketing costs, and IT support fees. included an arbitrarily determined IT efficiency gain. rejected ATCO Gas's proposal to provide for a real increase in labour costs.

⁸³ See: KPMG, *The IT Operating Expenditure of the Access Arrangement for the Mid-West and South-West Gas Distribution System*, November 2014; KPMG, *The corporate support operating costs of the MidWest and South-West Gas Distribution Systems*, November 2014; Acil Allen Consulting, *Operating Expenditure*, November 2014; and Zincara, *Review of ATCO Gas Australia Capital and Operating Expenditure*, November 2014.

⁸⁴ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 48.

⁸⁵ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014, paragraph 227.

⁸⁶ *Op cit*, paragraph 321.

⁸⁷ *Op cit*, paragraph 522 to 524.

⁸⁸ Acil Allen Consulting, *Operating Expenditure*, November 2014, page 12.

Acil Allen concludes that the analysis underpinning the ERA's decision to disallow network operating expenditure, corporate operating expenditure and IT operating expenditure is not robust.

I interpret this expert opinion as giving weight to that of KPMG and Zincara, to the effect that the ERA has not determined a forecast value for the operating expenditure cost building block that complies with the rules. In consequence Acil Allen's finding also gives weight to the inference I draw that the ERA's draft decision in relation to the operating expenditure building block does not meet the NGO contribution requirement.

4.11 Technical operating and capital expenditure

An expert report by Zincara assesses the ERA's decision to disallow portions of ATCO's proposed sustaining capital expenditure, growth capital expenditure and operating expenditure.⁸⁹

I summarise the relevant aspects of ATCO's revised proposal, the ERA's draft decision and the conclusion drawn by Zincara in Table 11 below.

Table 11 Summary of matters relevant to technical operating and capital expenditure

Technical capital and operating expenditure	
ATCO's revised proposal	<ul style="list-style-type: none"> • \$292 million on sustaining capital expenditure over AA4.⁹⁰ • \$234 million on growth capital expenditure over AA4.⁹¹ • \$182 million on network operation expenditure over AA4.⁹²
ERA's Draft Decision	<ul style="list-style-type: none"> • \$214 million of sustaining capital expenditure over AA4 (\$97 million rejected).⁹³ <ul style="list-style-type: none"> > ATCO Gas has not conducted a cost benefit analysis⁹⁴ > ATCO Gas set the risk threshold for catastrophic events too low⁹⁵ • \$24 million of growth capital expenditure over AA4 (\$205 million rejected).⁹⁶ <ul style="list-style-type: none"> > Reduce average consumption and increase B3 tariffs with CPI rather than 5.6 per cent in NPV analysis.⁹⁷ > Revised assumptions in NPV analysis indicates \$205 million of growth capital expenditure fails incremental revenue test under rule 79.⁹⁸ • \$164 million of network operation expenditure over AA4 (\$19 million rejected)⁹⁹ <ul style="list-style-type: none"> > ATCO's forecasting approach overstates expenditure¹⁰⁰

⁸⁹ Zincara, *Review of ATCO Gas Australia Capital and Operating Expenditure*, November 2014.

⁹⁰ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 122.

⁹¹ *Ibid.*

⁹² *Op cit*, page 48.

⁹³ ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014, paragraph 456.

⁹⁴ *Op cit*, paragraph 451.

⁹⁵ *Op cit*, paragraph 451.

⁹⁶ *Op cit*, paragraph 482 and Table 31.

⁹⁷ *Op cit*, paragraph 463 and 464.

⁹⁸ *Op cit*, paragraph 482.

⁹⁹ *Op cit*, paragraph 235.

¹⁰⁰ *Op cit*, paragraph 236.

- > \$19 million of network operating expenditure does not comply with rule 74 and rule 91.¹⁰¹

Expert Opinion

- In regard to sustaining capital expenditure:
 - > ATCO Gas misinterpret the acronym for 'as low as reasonably practicable' to mean "acceptable risk" in its Asset Management Plan and Safety Case, but this has no impact on safety or cost.s¹⁰²
 - > ATCO Gas' risk threshold for catastrophic events is consistent with industry practice.¹⁰³
 - > \$85 million of projects that the ERA rejected are consistent with rule 79(2) because they provide solutions to events considered high-risk.¹⁰⁴
 - In regard to growth capital expenditure:¹⁰⁵
 - > Average consumption used in ERA analysis is too low.
 - > ATCO Gas revise average consumption down and still get positive NPV and therefore do not require a cost benefit analysis.
 - > ATCO's Greenfields customer initiated capital expenditure complies with rule 74, 79(1) and 79(2)(b).
 - In regard to network operation expenditure:
 - > The incremental recurring expenditure complies with rule 91(1).¹⁰⁶
 - > Some incremental recurring expenditure is related to network growth and may need to be reduced subject to the ERA's final decision.¹⁰⁷
-

The ERA draft decision disallows approximately \$302 million of sustaining capital expenditure and growth capital expenditure, as compared with ATCO's proposal. In Zincara's opinion, this is consistent with the criteria at rule 79.

It follows that the ERA's draft decision acts to exclude from the projected asset base capital expenditure that:¹⁰⁸

'...would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services.'

It follows that the ERA's draft decision in relation to ATCO's capital expenditure in the forthcoming regulatory period will not promote efficient investment in natural gas services. Further, the significance of this conclusion in the context of the reference services provided by ATCO Gas is magnified by the quantum of expenditure to which it relates.

Further, by excluding from the projected capital base capital expenditure required to connect greenfield customers that would otherwise be willing to pay prices sufficient to cover the cost of providing natural gas services, there are significant adverse implications for the long term interest of consumers, who are denied the opportunity to have a gas supply service they would willingly pay for.

¹⁰¹ Op cit, paragraph 235.

¹⁰² Zincara, *Review of ATCO Gas Australia Capital and Operating Expenditure*, November 2014, page 5.

¹⁰³ Op cit, page 5 and 6.

¹⁰⁴ See: Zincara, *Review of ATCO Gas Australia Capital and Operating Expenditure*, November 2014, page 6; and ERA, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014, paragraph 452.

¹⁰⁵ Op cit, page 6.

¹⁰⁶ Op cit, page 7.

¹⁰⁷ Op cit, page 53.

¹⁰⁸ NGR, rule 79(1).

For these reasons, I take Zincara's expert opinion as confirming that the ERA's draft decision in relation to sustaining and growth capital expenditure does not meet the NGO contribution requirement. Similarly, by excluding from the cost building block for forecast operating expenditure incremental, recurring expenditure that meets the requirement at rule 91(1), the ERA's draft decision neither promotes efficient investment in, nor efficient use of, natural gas services.

Again, it follows that Zincara's expert opinion confirms that the forecast level of network operation expenditure indicated in the ERA's draft decision does not meet the NGO contribution requirement.

4.12 Marketing and business development operating expenditure

Mr Brent Stewart has provided an expert opinion on whether the strategy to which ATCO Gas' proposed marketing and business development operating expenditure relates is aligned with ATCO Gas' target market, ie, customers in tariff class B2 and B3.

I summarise the relevant aspects of ATCO Gas' revised proposal, the ERA's draft decision and Mr Stewart's expert opinion in Table 12 below.

Table 12 Summary of matters relevant to operating expenditure of marketing and business development

ATCO's revised proposal	<ul style="list-style-type: none"> • Propose \$20.8 million expenditure for marketing and business development opex. New initiatives aim to attract new customers and increase consumption of existing customers.¹⁰⁹
ERA's Draft Decision	<ul style="list-style-type: none"> • The proposed expenditure is too high for the amount of new customers it will bring.¹¹⁰ • ATCO Gas has not shown an appropriate degree of confidence that the program will ultimately lead to lower sustainable costs for customers or consistency with rule 91.¹¹¹
Expert Opinion	<ul style="list-style-type: none"> • ATCO Gas' business development marketing strategy conforms with acceptable marketing practice, ie:¹¹² <ul style="list-style-type: none"> > it employed professional external experts to assist with the development of its BDM strategy and this forms the basis for ATCO Gas' marketing plan. > it conducted market research through external third parties to better understand the target market. > it developed a marketing plan that logically draws from the abovementioned body of work and sets out a clear path of execution.

Mr Stewart concludes that the operating expenditure to which ATCO Gas' marketing and business development operating expenditure relate is based on sound commercial principles and rationale.

¹⁰⁹ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 88.

¹¹⁰ Economic Regulation Authority of Western Australia, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014, paragraph 253 to 272

¹¹¹ *Op cit*, paragraph 255.

¹¹² Brent Stewart, *ATCO Gas Australia Pty Ltd – Economic Regulation Authority Price Determination: A report prepared by Brent Stewart*, November 2014, page 8.

Mr Stewart's opinion provides support for the proposition that ATCO Gas acted 'in accordance with accepted good industry practice', as required by rule 91, when preparing its forecast marketing and business development operating expenditure.

Although the ERA's expresses a different conclusion as to the implied 'efficiency' of ATCO Gas' proposed expenditure, it does not present any analytical basis for this conclusion. For this reason, in my opinion Mr Stewart's conclusion that ATCO Gas' proposed marketing strategy is 'in accordance with accepted and good industry practice' means the expenditure allowance that follows from it is more likely to meet the contribution to the NGO requirement.

4.13 Forecast gas demand

Core Energy has provided an expert opinion that:

- sets out revised gas demand forecasts to incorporate updated demand data and additional information to 31 October 2014;¹¹³ and
- assesses the validity of the adjustments made by ERA to ATCO's proposed demand forecast.¹¹⁴

The level of forecast gas demand has very significant implications for the planning and financing of the level of capital and operating expenditure required to meet that demand. It therefore also affects the contribution to the total revenue building blocks pertaining to:

- the return on the projected capital base;
- depreciation on the projected capital base; and
- the allowance for operating expenditure

Consequently, it is imperative that the best estimate of forecast gas demand is applied when giving effect to each relevant building block. Table 13 below sets out the relevant aspects of ATCO Gas' revised proposal, the ERA's draft decision and Core Energy's expert opinion.

Table 13 Summary of matters relevant to forecast gas demand

Gas Demand Forecast	
ATCO's proposal	<ul style="list-style-type: none"> • On average 16,980 new customers in tariff class B3 in each year from 2015 to 2019.¹¹⁵ • Tariff class B2 average gas consumption will be 110 GJ per year on average from 2015 to 2019¹¹⁶ • Tariff class B3 average gas consumption will be 14.2 GJ per year on average from 2015 to 2019¹¹⁷
ERA's Draft Decision	<ul style="list-style-type: none"> • ATCO's proposed business development and marketing campaign will not have the impact on customer usage that ATCO Gas foresees.¹¹⁸

¹¹³ Core Energy, *Gas Demand Forecast*, Mid-West and South-West Gas Distribution System, Gas Access Arrangement 2015 to 2019, November 2014.

¹¹⁴ Core Energy, Expert Witness Report to Johnson Winter & Slattery, 25 November 2014.

¹¹⁵ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page 28.

¹¹⁶ *Op cit*, page 30.

¹¹⁷ *Op cit*, page 30.

¹¹⁸ Economic Regulation Authority of Western Australia, Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South West Gas Distribution System, 14 October 2014, paragraph 118.

- Considers ATCO Gas has not provided any evidence that the expansion initiative of greenfield customer initiated capital expenditure satisfies the incremental revenue test under rule 79(2)(b).¹¹⁹
- Lowered ATCO's customer numbers from excluding ATCO's proposed customer initiated greenfield growth capital expenditure from conforming capital expenditure, ie:¹²⁰
 - > Approximately 3,300 new B3 customers per year on average over AA4 regulatory period.
- Reduced average residential gas consumption in each year of AA4 regulatory period, ie:¹²¹
 - > Tariff class B2 average gas consumption will be 80 GJ per year from 2014 onwards.
 - > Tariff class B3 average gas consumption will be 12 GJ per year from 2014 onwards.

Expert Opinion

- Inclusive of marketing impact:
 - > On average 15,356 new customers in tariff class B3 each year.¹²²
 - > Tariff class B2 average gas consumption will be 113 GJ per year on average over AA4 regulatory period.¹²³
 - > Tariff class B3 average gas consumption will be 14.3 GJ per year on average over AA4 regulatory period.¹²⁴
- Exclusive of marketing demand:
 - > On average 14,634 new customers in tariff class B3 each year.¹²⁵
 - > Tariff class B2 average gas consumption will be 112 GJ per year on average over AA4 regulatory period.¹²⁶
 - > Tariff class B3 average gas consumption will be 14.2 GJ per year on average over AA4 regulatory period.¹²⁷
- The ERA's approach is flawed because:¹²⁸
 - > It relies on a demand per connection for both B2 and B3 customers that is not adequately supported by a quantitative basis;
 - > An assumption of constant usage for existing B2 and B3 customers is inconsistent with trends in demand observed historically and has not been justified by reference to specific analysis.

Core Energy's expert opinion indicates that the ERA has:

- substantially under-forecast the number of new residential customers (tariff class B3) to be connected over the regulatory period;
- overestimated the average gas consumption of existing commercial customers in tariff class B2; and
- underestimated the average gas consumption of new residential customers, and overestimated the average gas consumption of existing residential customers (tariff class B3).

¹¹⁹ *Op cit*, page 28 and 29.

¹²⁰ *Op cit*, page 29 and 30.

¹²¹ *Op cit*, page 29.

¹²² Core Energy, *Gas Demand Forecast, Mid-West and South-West Gas Distribution System, Gas Access Arrangement 2015 to 2019*, November 2014, page 9.

¹²³ *Op cit*, page 8.

¹²⁴ *Op cit*, page 10.

¹²⁵ *Op cit*, page 17.

¹²⁶ *Op cit*, page 16.

¹²⁷ *Op cit*, page 18.

¹²⁸ Core Energy, Expert Witness Report to Johnson Winter & Slattery, 25 November 2014, page 3.

Applying the building block approach using a gas demand forecast with a substantial downward bias will cause ATCO Gas not to be able to recover its costs, and not to undertake investment in network infrastructure that would otherwise be deemed efficient.

On the basis of the analysis and opinion presented by Core Energy, the forecast gas volume underpinning the ERA's draft decision are highly unlikely to promote efficient investment in, or operation of, natural gas services. I conclude that the gas demand forecasts in the ERA's draft decision do not meet the contribution to NGO requirement.

4.14 Summary and Conclusion

I have reviewed reports prepared by twelve experts, each addressing one or more constituent decisions arising in the application of the building block methodology to determine the total revenue in each regulatory year, and so reference tariffs for ATCO Gas. An overwhelming theme across each of these reports is the magnitude of the gap between the methodological approach adopted and the outcome of applying that approach, as between ATGO Gas' proposed revised access arrangement and the draft decision of the ERA.

One means of gaining some perspective on that gap is the extent to which either ATGO Gas' proposed revised access arrangement or the ERA's draft decision departs from the *status quo*. Although the status quo does not accord any explicit weight in the application of the rule 76 building blocks or the promotion of the NGO, in my opinion it draws significance from the fact that ATCO Gas is a privately owned, for-profit entity operating an established business under an incentive based framework of economic regulation. This combination of economic forces gives rise to the presumption that ATGO Gas' current mode of operation can be presumed generally to be prudent and efficient, and in accordance with accepted good industry practice. By virtue of the sustainability implied by these criteria, it can also be presumed to be in the long term interests of consumers.

Consistent with this presumption, ATCO Gas' revised access arrangement proposal involves forward-looking average prices (expressed in terms of revenue per GJ) that are within one per cent of prices at the end of the last regulatory period.¹²⁹ By contrast, the ERA's draft decision contemplates a downward adjustment to average prices, averaged over the regulatory period, of 29 per cent, as compared with average prices at the end of the last regulatory period.¹³⁰ In my opinion, the ERA's contention that changes of such magnitude – driven primarily by cuts to allowances for operating and capital expenditure and the rate of return – can meet the NGO contribution requirement, stretches credulity.

Further, a systematic shortfall in the approach apparently adopted in the ERA's draft decision is the paucity of explicit recognition of the linkages between various critical components of the building block approach. Most particularly, the ERA's draft decision barely acknowledges the link between its forecast of new customer demand (and its contended position as to the whether those new customers are 'economic' to serve), and its related decisions in relation to the average level of reference tariffs, the structure of reference tariffs, and the implication of its pessimism for expenditure allowances. By way of example, the draft decision disallows a significant proportion of ATCO's proposed growth expenditure related to connecting new customers, ie, the ERA allows growth expenditure sufficient to connect approximately 2,000 customers a year. Notwithstanding, ATCO Gas has already connected 17,000 new customers in 2014.¹³¹

My review of each expert shows that, in relation to the constituent decision that the ERA is to make under each building block, there is strong evidence that the NGO contribution requirement is not met. The implications for the promotion of the NGO across each element are substantial. Of course, the ERA's task is

¹²⁹ Based on information provided by ATCO I calculate average prices in 2013 to be \$7.59 (total tariff revenue of \$177.1 million divided by gas volume of 23,342 TJ) and average prices over the AA4 period under ATCO's revised proposal to be \$7.53 (total revenue of \$1,124 million divided by gas volume of 149,286 TJ).

¹³⁰ I calculate average prices over the AA4 period under the ERA's draft decision to be \$5.41 (total revenue of \$836 million divided by gas volume of 154,597 TJ).

¹³¹ ATCO, Response to the ERA's Draft Decision on required amendments to the Access Arrangement for the Mid-West and South-West Gas Distribution System, 27 November 2014, page

to strike a balance between the imperative that efficient costs are able to be recovered, and the long term interests of consumers. However, in weighing that trade-off, virtually every reference by the ERA to the interests of consumer is limited to a short term perspective that generally does not extend beyond the forthcoming, AA4 regulatory period.

By contrast, and consistent with the imperative that long term assets be managed with a long term perspective on the services to be provided, the ERA is required by the NGO to have regard to the long term interests of consumers. This consideration should have been weighed much more heavily than appears to be the case in the ERA's approach to demand forecasts, expenditure allowances and depreciation, in particular.

For both these overarching reasons and those particular considerations I discuss above in relation to the constituent decision addressed by each expert, I conclude that the ERA has not met the NGO contribution requirement in any of the above elements of the building block approach, as it is required to be applied in relation to ATGO Gas.



5. A Materially Preferable Decision

In this section, I present my analysis of the 'third issue' that JWS has asked me to address, being whether, if the identified errors were to be corrected, this would be likely to result in a materially preferable designed NGO decision, overall.

In practical terms, this involves an assessment as to whether in relation to each of the building blocks that the ERA must determine under rule 76, including the constituent decisions associated with each of those elements, when assessed as a whole would, if corrected, result in a materially preferable overall decision.

In order to assist the development of an overarching perspective on this question, at Table 14 and Table 15 below I present summaries of:

- for each draft decision parameter and its associated building block that has been reviewed by one or more experts, the conclusion drawn by that expert as to the nature of the error in the ERA's draft decision, and the particular element of the NGO that will not be promoted unless that error is corrected; and
- for each building block element, a summary of the quantitative contribution of that element to the overall decision, expressed in dollar terms, with values for both ATCO Gas' revised access arrangement proposal, and the ERA draft decision.

Table 14 Constituent components of draft decision and their implications as to the NGO

Constituent Component of draft decision	Corresponding building block	Aspect of NGO not promoted
Cost of debt	Return on capital base	Efficient investment in natural gas services
Cost of equity	Return on capital base	Efficient investment in natural gas services
Gamma	Return on capital base Cost of corporate income tax	Efficient investment in natural gas services
Depreciation	Depreciation on capital base	Efficient use of natural gas services Efficient investment in natural gas services
Tax depreciation	Cost of corporate income tax	Efficient investment in natural gas services Efficient operation of natural gas services
Operating expenditure for corporate support	Forecast operating expenditure	Efficient investment in natural gas services Efficient operation of natural gas services
Operating expenditure for IT	Forecast operating expenditure	Efficient investment in natural gas services Efficient operation of natural gas services
Operating expenditure forecasts	Forecast operating expenditure	Efficient investment in natural gas services Efficient operation of natural gas services
Technical capital expenditure and operating expenditure	Forecast operating expenditure Return on capital base Depreciation on capital base	Efficient investment in natural gas services Efficient operation of natural gas services
Operating and capital expenditure benchmarking	Forecast operating expenditure Return on capital base Depreciation on capital base	Efficient investment in natural gas services Efficient operation of natural gas services
Business development and marketing operating expenditure	Forecast operating expenditure	Efficient investment in natural gas services Efficient operation of natural gas services
Demand forecasts	Forecast operating expenditure Return on capital base Depreciation on capital base	Efficient investment in natural gas services Efficient use of natural gas services Interest of consumers

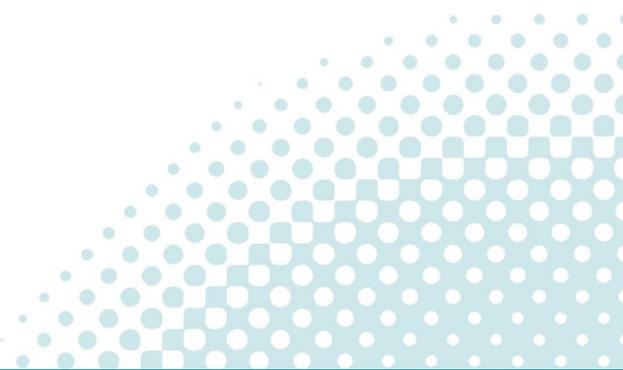


Table 15 Contribution of building block¹³²

	Draft Decision (Nominal \$m)	ATCO Gas Revised proposal (Nominal \$m)	Difference (Nominal \$m)
Return on projected capital base	363.0	512.5	-149.5
Depreciation on projected capital base*	94.6	127.7	-33.1
Estimated cost of corporate income tax	4.1	41.0	-37.0
Incentive scheme increments/decrements	0.0	0.0	0.0
Forecast of operating expenditure	373.6	442.0	-68.5
Return on working capital	0.9	1.2	-0.3
Total Revenue	836.1	1,124.5	-288.4

*In my opinion the additional cost building block for an inflationary gain identified in the ERA's draft decision should be accounted for in the 'depreciation on the projected capital base' cost building block.¹³³

From the perspective of a regulatory economist, there are two reasons why it may be appropriate for a review body – such as the Competition Tribunal – in circumstances where one or more errors in constituent decisions within an overall framework of economic regulation have been identified, to be asked to turn its mind to the question of whether varying or correcting that decision would result in a 'materially preferable' decision, when assessed by reference to the NGO.

First, the process of assessing and reviewing elements of a regulatory decision necessarily involves making a series of determinations in relation to estimates or forecast future values of critical parameters. As a matter of principle, the judgments that must be applied may fall into error on either the upside or downside, with the effect that each may mitigate the other in terms of the end result. A requirement to consider the decision 'as a whole' against the materially preferable threshold, amounts to a practicable means for dealing in aggregate with a series of errors that, taken together, may not have much consequence.

Second, many of the constituent decisions have economic linkages between one another, so that error in one has implications for another, even if, in its own terms, the second decision is appropriate. Further the emphasis on dynamic efficiency within the NGO - through its explicit emphasis given to the long term (as distinct from short term) interests of consumers, provides for the possibility that the correction of some errors warrants greater weight than the correction of others. By way of example, a depreciation decision that transferred the recovery of capital away from long term consumers and towards short term consumers should, on its face, receive a greater weighing in assessing what is preferable overall, than a depreciation decision that gave rise to the reverse effect.

In my assessment of whether, when assessed as a whole, the correction of the errors that have been identified by the various experts would result in a materially preferable designated NGO decision, I have given particular emphasis to the fact that:

- the quantitative sum of the errors that have been identified is very substantial, and involves no identified offsetting adjustments – further, even if a number of not presently identified offsetting adjustments were subsequently to emerge, it seems highly unlikely that these could be sufficient to change the materiality in aggregate of the errors that have been identified;
- a disproportionate number and/or value of the errors that have been identified involve an apparently strong emphasis given by the ERA to the short term interests of (existing) customers, at the expense

¹³² This table is drawn from data provided by JWS and included at Appendix 1.

¹³³ HoustonKemp, Evaluation of ERA's Draft Decision on ATCO's Depreciation Allowance. 26 November 2014, page 3 to 6.

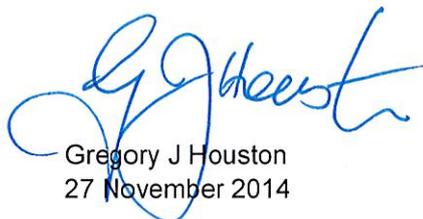
of the long term interests of consumers (including potential customers) – particularly significant examples include the ERA's draft decision in relation to the future rate of new customer connections, and depreciation;

- the aggregate consequence of the ERA's draft decision involves reductions in the average price of reference services in the order of 24 per cent, without a clear picture of any underlying economic change of circumstance that would warrant such a dramatic price adjustment – rather, the principal drivers of this outcome appear to be a 'change of approach' instigated by the ERA in relation to both new customer connections (with its attendant implications for capital expenditure), and the costs of debt and equity; and
- finally, as I describe in sections 3 and 4 above and with particular regard to my analysis of both the NGO and the revenue and pricing principles, when taken as a whole the ATCO Gas revised proposal makes a significant and substantial contribution to the NGO as compared with the ERA draft decision.

For these reasons, in my opinion it is clear that the correction of all the errors identified would result in a materially preferable designated NGO decision.

6. Declaration

In accordance with the 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.

A handwritten signature in blue ink, appearing to read "Gregory J Houston". The signature is stylized with large, flowing loops.

Gregory J Houston
27 November 2014

A1. Appendix 1-Tables provided by JWS



(nominal \$)

Building blocks	Draft Decision	ATCO proposal
Return on projected capital base (NGR 76(a))	363.02	512.53
Depreciation on projected capital base (NGR 76(b))	231.87	127.68
Estimated cost of corporate income tax (NGR 76(c))	4.06	41.05
Incentive scheme increments/decrements (NGR 76(d), 98)	0.00	0.00
Forecast of operating expenditure (NGR 76(e), 91)	373.56	442.02
Return on working capital	0.90	1.24
Inflationary gain	-137.31	0.00
	836.10	1,124.52

(real \$)

Projected capital base (NGR 78)	Draft Decision	ATCO proposal
Opening capital base in AA3 (NGR 77(2)(a))	877.72	878.04
Conforming capex during AA3 (NGR 77(2)(b))	263.60	262.99
Sustaining capex	81.16	75.36
Growth capex	136.57	137.23
Structures and equipment capex	31.97	28.04
IT capex	10.94	19.04
WestNet Energy assets capex	3.32	3.32
CPI adjustment	-0.36	0.00
Capital contributions during AA3 (NGR 77(2)(c), 82)	0.00	0.00
Speculative capex account (NGR 77(2)(c), 84)	0.00	0.00
Re-use of redundant assets (NGR 77(2)(c), 86)	0.00	0.00
Depreciation over AA3 (NGR 77(2)(d))	-133.04	-133.08
Redundant assets identified in AA3 (NGR 77(2)(e))	0.00	0.00
Pipeline assets disposed of in AA3 (NGR 77(2)(f))	0.00	0.00
Opening capital base for AA4	1,008.28	1,007.95
Forecast conforming capex for AA4 (NGR 78(b), 79)	286.45	592.22
Sustaining capex	213.90	291.76
Growth capex	24.00	233.90
Structures and equipment capex	35.77	40.23
IT capex	25.14	26.34
Labour escalation factor	-10.56	0.00
Overheads	-1.80	0.00
Forecast depreciation for AA4 (NGR 78(c))	-214.90	-243.91
Forecast pipeline assets to disposed of in AA4 (NGR 78(d))	0.00	0.00
Closing capital base for AA4	1,079.83	1,356.26

Rate of return (NGR 87)	Draft Decision		ATCO proposal	
	<i>(nominal \$)</i>		<i>(nominal \$)</i>	
Return on equity for AA4 (NGR 87(4), (6)-(7))				
Risk free rate	2.95%	72.09	3.58%	
	Sharpe Lintner		Weighted average of	
Relevant models for estimating return on equity	CAPM		various	
Market risk premium	5.50%		7.61%	
Equity beta	0.70		0.82	
CAPM equity risk premium	3.85%	94.08	6.24%	
<i>Return on equity</i>	<u>6.80%</u>	<u>166.18</u>	<u>10.51%</u>	<u>281.95</u>
Return on debt for AA4 (NGR 87(4), (8)-(12))				
Risk free rate	2.95%	108.14		
Debt risk premium	2.27%	83.21		
Corporate spread estimate			5.58%	224.54
Debt raising costs	0.125%	4.58	0.125%	5.03
Hedging costs	0.025%	0.92	0.025%	1.01
<i>Return on debt</i>	<u>5.37%</u>	<u>196.84</u>	<u>5.73%</u>	<u>230.58</u>
<i>Overall rate of return</i>	<u>5.94%</u>	<u>363.02</u>	<u>7.64%</u>	<u>512.53</u>

(nominal \$)

Estimated cost of corporate income tax (NG	Draft Decision	ATCO
Estimated corporate income tax	8.13	54.74
Value of imputation credits (NGR 87A)	-4.07	-13.69
Distribution rate (F)	0.70	0.70
Theta	<u>0.70</u>	<u>0.35</u>
Gamma	<u>0.5</u>	<u>0.25</u>
	<u>4.07</u>	<u>41.05</u>

(nominal \$)

Forecast operating expenditure (NGR 76(e), 91)	Draft Decision	ATCO proposal
Network opex	<u>175.91</u>	<u>197.49</u>
Baseline recurring network opex	160.25	172.77
Incremental recurring network opex	20.67	22.76
One-off network opex	1.91	1.96
Labour escalation factor	-0.41	0.00
IT efficiency gain	-6.50	0.00
Corporate operating opex	<u>100.84</u>	<u>133.90</u>
Corporate support opex	75.06	95.75
Business development and marketing opex	10.40	22.53
Licence fee opex	15.38	15.62
IT opex	<u>46.91</u>	<u>62.07</u>
License fees	14.49	14.51
Usage fee	0.20	1.91
Services fee	32.22	45.65
UAFG opex	45.84	44.95
Ancillary service opex	4.04	3.62
	<u>373.54</u>	<u>442.03</u>

A2. Annexure A - Instructions



JOHNSON WINTER & SLATTERY
L A W Y E R S

Partner: Roxanne Smith +61 8239 7108
Email: roxanne.smith@jws.com.au
Our Ref: B1299
Your Ref:
Doc ID: 66245594.1

27 November 2014

Mr Greg Houston
Houston Kemp
161 Castlereagh Street
SYDNEY NSW 2000

BY EMAIL

Dear Sir

ATCO Gas Australia Pty Ltd – ERA Price Determination – Request for Expert Opinion – contribution to NGO requirement – preferable designated reviewable regulatory decision – whether correcting errors as identified would (or would be likely to) be materially preferable

We act for ATCO Gas Australia Pty Ltd (**ATCO Gas**) who wishes to retain you to provide certain expert assessments and opinions as outlined below and to prepare a report to be completed before **27 November 2014** recording your assessments/opinions.

The background to the preparation of the report is as follows.

Terms of Reference

ERA Draft Decision/Final Decision

As you are aware, the Economic Regulatory Authority of Western Australia (**ERA**) has recently issued its Draft Decision in relation to ATCO Gas' proposed access arrangement. Following submissions and other material which ATCO Gas will shortly submit to the ERA in response to the Draft Decision, the ERA is required to make a designated reviewable regulatory decision¹ (which will be the Final Decision).

Obligations on ERA when making the Final Decision – contribution to NGO

Under the National Gas Law (**NGL**), the ERA must, in performing or exercising an economic regulatory function or power, including the making of a designated reviewable regulatory decision, perform or exercise that function or power in a manner that will or is likely to

¹ See s 2(1) of the National Gas Law.

contribute to the achievement of the national gas objective² (referred to below as the “*contribution to NGO requirement*”).

The national gas objective (NGO) is defined in section 23 of the NGL as:

“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.”

Further, under the NGL, if the ERA is making a designated reviewable regulatory decision, it must³ specify:

- (a) the manner in which the constituent components of the decision relate to each other; and
- (b) the manner in which that interrelationship has been taken into account in the making of the decision.

Where there are two or more possible designated reviewable regulatory decisions – materially preferable test

Further, under the NGL, in making a designated reviewable regulatory decision, where there are two or more possible designated reviewable regulatory decisions that could be made, the ERA is required:

- (a) to make the one that the ERA is satisfied will or is likely to contribute to the achievement of the national gas objective (as stated above) to the greatest degree (defined in the NGL as “*the preferable designated reviewable regulatory decision*”); and
- (b) to specify the reasons for the basis of that satisfaction.⁴

(collectively “*the preferable designated reviewable regulatory decision requirement*”).

Tribunal review of Final Decision – materially preferable test

Further, on any merits review by ATCO Gas of the Final Decision before the Australian Competition Tribunal, the Tribunal is only entitled to vary or set aside the Final Decision if it is satisfied that to do so will, or is likely to, result in a decision that is materially preferable to the Final Decision in making a contribution to the achievement of the national gas objective (“*a materially preferable designated NGO decision*”).⁵

Errors identified in the Draft Decision by experts retained by ATCO Gas

ATCO Gas has retained a number of experts who have reviewed the Draft Decision and who have expressed certain opinions in relation to various matters in the Draft Decision, including that the ERA has fallen into error in a number of respects as outlined in the reports (**Expert Reports**). In some cases, the expert may not formally have specifically identified error(s) but rather this is to be inferred from their opinion to the extent to which it differs from the ERA’s Draft Decision. You will need to take this into account when addressing the third issue we

² See s 28(1)(a) of the NGL.

³ As required by s 28(1)(b)(ii) of the NGL.

⁴ As to paragraphs (a) and (b) above, see s 28(1)(b)(iii) of the NGL.

⁵ As that term is defined in s 259(4a)(c) of the NGL.

ask you to opine on as identified later in this letter. A list of the experts, together with the Expert Reports, and the key areas covered by those reports, is set out in the Table below.

Expert	Subject matter
Tom Hird (CEG)	Cost of debt
Stephen Gray (SFG Consulting)	Cost of equity
Stephen Gray (SFG Consulting)	Gamma
Greg Houston (Houston Kemp)	Depreciation
Keith Lockey (KPMG)	Corporate support opex
Ted Surette (KPMG)	IT opex
Ed Teoh (Zincara)	Technical capex and opex
Deidre Rose (ACIL Allen)	Opex and capex benchmarking
Marianne Lourey (ACIL Allen)	Review of opex forecasts
Vaughan Lindfield (Ernst & Young)	Tax depreciation
Brent Stewart	Business development and marketing opex
Paul Taliangis (Core Energy Group)	Demand forecasts

In addition to addressing certain errors on certain topics, you will see that a number of the experts have also opined within the relevant Expert Report on whether, on the assumption that the Draft Decision is repeated as the Final Decision, the errors as identified by the expert, either separately or collectively, if corrected would, or would be likely to result in a materially preferable designated NGO decision as regards the relevant topic or topics covered by the relevant Expert Report.

You will also see that each Expert Report as referred to in the Table does not assess, across the whole of the Draft Decision, whether, on the assumption that the Draft Decision is repeated in the Final Decision:

- (a) the ERA will have met the contribution to NGO requirement or the preferable designated reviewable regulatory decision requirement overall; or
- (b) either separately or collectively,⁶ the errors identified in each of the Expert Reports if corrected would, or would be likely to, result in a materially preferable designated NGO decision overall.

Request to prepare Expert Report

In the light of the above, we request that you prepare a report on the Final Decision on the assumption that the position adopted by the ERA, including the errors (if any), in the Draft Decision as identified by the experts are repeated in the Final Decision, addressing the following three key issues (in each case making that assumption):

First Issue - whether the NGO requirement will be met by the Final Decision

1 If the Final Decision contains the errors identified in the Expert Reports, please give your opinion whether, in making the Final Decision, the ERA will have met the contribution to NGO requirement. When expressing your opinion on this issue, would you please:

- (a) set out your understanding of the NGO requirement;
- (b) having regard to paragraph (a) above, set out the principles which should be adopted in a regulatory regime which promotes the NGO requirement.

⁶ See s 246(1a) of the NGL.

Please explain how the revenue and pricing principles in section 24 of the NGL may be relevant in this regard;

- (c) having regard to paragraphs (a) and (b) above, explain the role of the building blocks approach under the National Gas Rules (**Rules**) and whether it is concordant with those principles and therefore the NGO requirement;
- (d) having regard to paragraphs (a) to (c) above, explain how in your view (if at all) a failure to comply with those principles and/or the Rules as they relate to the building blocks approach (and any other Rules in any other relevant regard) is, or is likely, to result in a failure to meet the NGO requirement;
- (e) indicate whether the ERA has, as required by the NGL,⁷ adequately (or at all) specified:
 - (i) the manner in which the constituent components of the decision relate to each other; and
 - (ii) the manner in which that interrelationship has been taken into account in the making of the decision,and if not, whether in your opinion this may have affected the ERA's ability to assess whether the NGO requirement has been met;
- (f) summarise any matters adopted by, and errors made by, the ERA as identified in the Expert Reports which suggest that the principles (including the revenue and pricing principles), the building blocks and the other Rules you have identified in paragraphs (b) to (d) above have been offended;
- (g) summarise each material constituent component of the Final Decision (assuming it adheres to the Draft Decision) and, in turn, the overall impact of the Final Decision on the business of ATCO over the regulatory review period (July 2014 to December 2019); and
- (h) opine on whether, having regard to the matters above which will be dealt with in your report, the ERA is likely to have met the NGO requirement. When assessing whether in your opinion the ERA has met the NGO requirement, please take into account the whole of the matters raised in the Expert Reports, not only the errors as identified by the experts.

Second Issue - whether preferable designated reviewable regulatory decision requirement met by the Final Decision

- 2 Having regard to the opinions you have expressed when addressing the first issue above, please assess and report on whether, having regard to the Expert Reports, the ERA will have met the preferable designated reviewable regulatory decision requirement. Please note again that, when assessing whether in your opinion the ERA has met this requirement, you should take into account the whole of the matters raised in the Expert Reports, not only the errors as identified by the experts.

Third Issue - whether materially preferable designated NGO decision will result if errors corrected

- 3 Further, please assess and report on whether, having regard to the Expert Reports, either separately or collectively,⁸ the errors identified in each of the reports, if

⁷ As required by s.28(1)(b)(ii) of the NGL.

⁸ See s.246(1a) of the National Gas Law

corrected, would, or would be likely to, result in a materially preferable designated NGO decision overall.

- 4 If you make an affirmative assessment in relation to the issue in question 3 above, please provide the basis upon which you make that assessment.
- 5 In particular, in making the assessment in relation to the issue in question 3 above, would you please include the following in your report:⁹
 - (a) a consideration of how the constituent components of those parts of the decision which each expert has been asked to consider interrelate with each other and with the matters which each expert has raised as errors (and which may therefore be grounds for review);
 - (b) how you have taken into account the revenue and pricing principles;¹⁰ and
 - (c) in assessing the extent of the contribution of the correction(s) identified in the Expert Reports to the achievement of the NGO, your consideration of the decision as a whole in respect of the topics the experts have reviewed. When addressing this issue, would you please relate your consideration of this issue to the matters you raise when addressing paragraphs (a) to (h) of question 1 above.
- 6 It is recognised that the experts have identified a significant number of errors in the Draft Decision (which may be repeated in the Final Decision). If you consider it relevant to do so, would you please prepare a ‘matrix’ of error outcomes, assessed against the materially preferable criteria referred to above.

In relation to question 5 above, we stress that this is not an exhaustive list and that any other matter that may be relevant under the NGL should be taken into account.¹¹

If you are in doubt about whether a matter may or may not be relevant in this regard, please include your consideration of it in your report. In particular, you should take into account any other matter you reasonably consider material and relevant and should indicate the relevant matter or matters which informs your opinions on the “materially preferable” issue referred to in question 3 above.

Further, in relation to questions 3 to 5 above, please note that¹² the following matters do not, in themselves, determine the question about whether a materially preferable decision exists, namely:

- (a) the establishment of a ground for review under section 246(1) – that is, whether there is error or are errors;
- (b) consequences for, or impacts on, the average annual regulated revenue of a covered pipeline service provider; or
- (c) that the amount that is specified in or derived from the decision exceeds the threshold amount required for the granting of leave (under section 249(2)).

As mentioned above, in addition to addressing certain issues and errors on certain topics, a number of Expert Reports contain opinions on whether (on the assumption that the Draft

⁹ Which the Tribunal itself is required under s 259(4b) of the NGL to have regard to when assessing whether a result will be, or will be likely to be, materially preferable.

¹⁰ Those principles are set out in s 24 of the NGL.

¹¹ The opening words of s 259(4b) of the NGL make this clear.

¹² As s 259(4b) of the NGL indicates.

Decision is repeated as the Final Decision) the errors as identified by the relevant expert, either separately or collectively, if corrected would, or would be likely to, result in a material preferable designated NGO decision as regards the relevant topic or topics covered by the relevant Expert Report. In forming your opinion on the third issue above, you should take into account the opinions of each such relevant expert on the materially preferable issue. If an expert has not expressed an opinion of this kind, you will need to assess their report and form your own opinion on the materially preferable issue as it relates to the report of that expert. Following these considerations, you must of course assess the third issue above having regard to your view of whether, overall, the result of the corrections would be materially preferable. You should also take into account that it may be possible that there may be considerations relevant to this question (for example interrelationships between constituent components) which have not (because the experts have reviewed the decision on a per topic or topics basis) been identified by the experts.

Your separate report on depreciation

Finally, for clarity we note that your report on depreciation has been included in the table referred to above. You have been retained to perform the work in that report as a separate exercise but you should take your report on the question of depreciation into account when doing the work and preparing the report requested in this letter.

If you have any queries, please contact us.

Use of Report

It is intended that your report will be submitted by ATCO Gas to the ERA with its response to the Draft Decision. The report may be provided by the ERA to its own advisers. The report must be expressed so that it may be relied upon both by ATCO Gas and by the ERA.

The ERA may ask queries in respect of the report and you will be required to assist in answering these queries. The ERA may choose to interview you and if so, you will be required to participate in any such interviews.

The report will be reviewed by ATCO Gas' legal advisers and will be used by them to provide legal advice as to its respective rights and obligations under the NGL and the Rules.

If ATCO Gas was to challenge any decision ultimately made by the ERA, that appeal will be made to the Australian Competition Tribunal and your report will be considered by the Tribunal. ATCO Gas may also seek review by a court and the report would be subject to consideration by such court. You should therefore be conscious that the report may be used in the resolution of a dispute between the ERA and ATCO Gas. Due to this, the report will need to comply with the Federal Court requirements for expert reports, which are outlined below.

Timeframe

ATCO Gas's response to the Draft Decision must be submitted by **27 November 2014** and your report will need to be finalised before that time.

Compliance with the Code of Conduct for Expert Witnesses

Attached is a copy of the Federal Court's Practice Note CM 7, entitled "*Expert Witnesses in Proceedings in the Federal Court of Australia*", which comprises the guidelines for expert witnesses in the Federal Court of Australia (**Expert Witness Guidelines**).

Please read and familiarise yourself with the Expert Witness Guidelines and comply with them at all times in the course of your engagement by ATCO Gas.

In particular, your report should contain a statement at the beginning to the effect that the author of the report has read, understood and complied with the Expert Witness Guidelines.

Your report must also:

- 1 contain particulars of the training, study or experience by which the expert has acquired specialised knowledge;
- 2 identify the questions that the expert has been asked to address;
- 3 set out separately each of the factual findings or assumptions on which the expert's opinion is based;
- 4 set out each of the expert's opinions separately from the factual findings or assumptions;
- 5 set out the reasons for each of the expert's opinions; and
- 6 otherwise comply with the Expert Witness Guidelines.

The expert is also required to state that each of the expert's opinions is wholly or substantially based on the expert's specialised knowledge.

It is also a requirement that the report be signed by the expert and include a declaration 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 report*".

Please also attach a copy of these terms of reference to the report.

Terms of Engagement

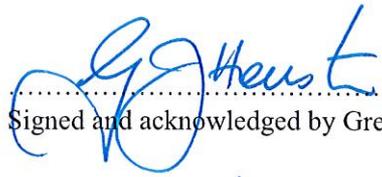
Your contract for the provision of the report will be directly with ATCO Gas. You should forward ATCO Gas any terms you propose govern that contract as well as your fee proposal.

Please sign a counterpart of this letter and return it to us to confirm your acceptance of the engagement.

Yours faithfully

Johnson Winter & Slattery

Enc: Federal Court of Australia Practice Note CM 7, "Expert Witnesses in Proceedings in the Federal Court of Australia"

.....
Signed and acknowledged by Greg Houston

Date 27 November 2014

FEDERAL COURT OF AUSTRALIA
Practice Note CM 7
**EXPERT WITNESSES IN PROCEEDINGS IN THE
FEDERAL COURT OF AUSTRALIA**

Practice Note CM 7 issued on 1 August 2011 is revoked with effect from midnight on 3 June 2013 and the following Practice Note is substituted.

Commencement

1. This Practice Note commences on 4 June 2013.

Introduction

2. Rule 23.12 of the Federal Court Rules 2011 requires a party to give a copy of the following guidelines to any witness they propose to retain for the purpose of preparing a report or giving evidence in a proceeding as to an opinion held by the witness that is wholly or substantially based on the specialised knowledge of the witness (see **Part 3.3 - Opinion** of the *Evidence Act 1995* (Cth)).
3. The guidelines are not intended to address all aspects of an expert witness's duties, but are intended to facilitate the admission of opinion evidence¹, and to assist experts to understand in general terms what the Court expects of them. Additionally, it is hoped that the guidelines will assist individual expert witnesses to avoid the criticism that is sometimes made (whether rightly or wrongly) that expert witnesses lack objectivity, or have coloured their evidence in favour of the party calling them.

Guidelines

1. General Duty to the Court²

- 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.

¹ As to the distinction between expert opinion evidence and expert assistance see *Evans Deakin Pty Ltd v Sebel Furniture Ltd* [2003] FCA 171 per Allsop J at [676].

² The "*Ikarian Reefer*" (1993) 20 FSR 563 at 565-566.

2. The Form of the Expert's Report³

- 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) above⁴; 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.*"
- 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 Court⁵.
- 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 reports⁶.

³ Rule 23.13.

⁴ See also *Dasreef Pty Limited v Nawaf Hawchar* [2011] HCA 21.

⁵ The "*Ikarian Reefer*" [1993] 20 FSR 563 at 565

⁶ The "*Ikarian Reefer*" [1993] 20 FSR 563 at 565-566. See also Ormrod "*Scientific Evidence in Court*" [1968] Crim LR 240

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

A3. 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. In his securities and finance work Greg has advised clients on a number of securities class action, market manipulation and insider trading proceedings, as well as on cost of capital estimation. 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.

Greg's industry experience spans the aviation, beverages, building products, cement, e-commerce, electricity and gas, forest products, grains, medical waste, mining, payments networks, petroleum, ports, rail transport, retailing, scrap metal, securities markets, steel, telecommunications, thoroughbred racing, waste processing and water sectors.

Greg has acted as expert witness in valuation, antitrust and regulatory proceedings before the courts, in various arbitration and mediation processes, and before regulatory and judicial bodies in Australia, Fiji, New Zealand, the Philippines, Singapore, the United Kingdom and the United States.

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 State 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

1989-2014 **NERA ECONOMIC CONSULTING**
Director (2000-2014)
London, United Kingdom (1989-1997); and 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 Experience

Regulatory Analysis

- 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**
Arbitral review of decision by the Vanuatu regulator
Expert report and evidence before arbitrators on a range of matters arising from the Vanuatu regulator's decision on the base price to apply under four electricity concession contracts entered into by UNELCO and the Vanuatu government. These included the estimation of the allowed rate of return including its country risk component, and the decision retrospectively to bring to account events from the prior regulatory period.
- 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.
- 2004** **Deacons/ACCC**
Implementation of DORC valuation
Prepared a report on the implementation of a cost-based DORC valuation, for submission to the Australian Competition Tribunal in connection with proceedings on the appropriate gas transportation tariffs for the Moomba to Sydney gas pipeline.
- 2003-04** **Natural Gas Corporation, New Zealand**
Gas pipeline regulation
Advisor in relation to the inquiry by the Commerce Commission into the case for formal economic regulation of gas pipelines. This role included assistance with the drafting of submissions, the provision of expert reports, and the giving of evidence before the Commerce Commission.
- 2001-03** **Rail Infrastructure Corporation**
Preparation of access undertaking
Advised on all economic aspects arising in the preparation of an access undertaking for the New South Wales rail network. Issues arising included: pricing principles under a 'negotiate and arbitrate' framework, asset valuation, efficient costs, capacity allocation and trading, and cost of capital.
- 2002** **Clayton Utz/TransGrid**
National Electricity Tribunal hearing
Retained as the principal economic expert in the appeal brought by Murraylink Transmission Company of NEMMCO's decision that TransGrid's proposed South Australia to New South Wales Electricity Interconnector was justified under the national electricity code's 'regulatory test'.
- 2001-02** **SPI PowerNet**
Revenue cap reset
Advisor on all regulatory and economic aspects of SPI PowerNet's application to the ACCC for review of its revenue cap applying from January 2003. This included assistance on regulatory strategy, asset valuation in the context of the transitional provisions of the national electricity code, drafting and editorial support for the application document, and the conduct of a 'devil's advocate' review.

- 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/Amcor**
Cartel damages assessment
Advice and preparation of an expert report on the approach to and quantification of economic loss in the context of two separate actions seeking damages arising from alleged cartel conduct.
- 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.

- 2004 Clayton Utz/Sydney Water Corporation**
Competition in sewage treatment
Retained to assist with Sydney Water's response to the application to have Sydney's waste water reticulation network declared under Part IIIa of the Trade Practices Act.
- 2004 Blake Dawson Waldron/Boral**
Competition analysis of cement market
Advice on Boral's proposed acquisition of Adelaide Brighton Ltd, a cement industry merger opposed in Federal Court proceedings by the ACCC. Boral subsequently decided not to proceed with the transaction.
- 2004 Minter Ellison/Singapore Power**
Merger clearance
Advice on competition issues arising from the proposed acquisition of TXU's Australian energy sector assets by Singapore Power. This included the submission of an expert report to the ACCC.
- 2004 Mallesons/Orica**
Competition in gas production and retail markets
Retained as expert witness in the appeal by Orica against the Minister's decision to revoke coverage under the gas code of the substantial part of the Moomba to Sydney gas pipeline. The case was subsequently settled.
- 2004 Courts, Fiji**
Merger clearance, abuse of market power
Prepared a report for submission to the Fijian Commerce Commission on the competition implications of the Courts' acquisition of the former Burns Philip retailing business, and related allegations of abuse of market power. The Commission subsequently cleared Courts of all competition concerns.
- 2003-04 Mallesons/Sydney Airport Corporation**
Competition in air travel market
Expert report and testimony before the Australian Competition Tribunal on economic aspects of the application by Virgin Blue for declaration of airside facilities at Sydney Airport under Part IIIa of the Trade Practices Act.
- 2003-04 Bartier Perry/ DM Faulkner**
Alleged collusive conduct
Submitted an expert report to the Federal Court in connection with allegations under s45 of the Trade Practices Act of collusive conduct leading to the substantial lessening of competition in the market for scrap metal. The 'substantial lessening of competition' element of this case was subsequently withdrawn.
- 2002-04 Essential Services Commission**
Effectiveness of competition
Advisor on six separate reviews of the effectiveness of competition and the impact of existing or proposed measures designed to enhance competition in the markets for wholesale gas supply, port channel access services, liquid petroleum gas, retail electricity and gas supplies, and port services.
- 2003 Gilbert + Tobin/AGL**
Vertical integration in electricity markets
Prepared a report on the international experience of vertical integration of electricity generation and retailing markets, in connection with proceedings brought by AGL against the ACCC. This report examined the principles applied by competition authorities in assessing such developments, and evidence of the subsequent impact on competition.

- 2002-03** **National Competition Council**
Gas market competition
Expert report in connection with the application by East Australian Pipeline Limited for revocation of coverage under the Gas Code of the Moomba to Sydney Pipeline System. The report addressed both the design of a test for whether market power was being exercised through pipeline transportation prices substantially in excess of long-run economic cost, and the assessment of existing prices by reference to this principle.
- 2001-03** **Blake Dawson Waldron/Qantas Airways**
Alleged predatory conduct
Directed a NERA team advising on all economic aspects of an alleged misuse of market power (section 46 of the Trade Practices Act) in Federal Court proceedings brought against Qantas by the ACCC. The proceedings were withdrawn soon after responding expert statements were filed.
- 2002** **Phillips Fox/AWB Limited**
Access and competition in bulk freight transportation
Expert report on the pricing arrangements for third party access to the Victorian rail network and their impact on competition in the related bulk freight transportation services market, preparation for the appeal before the Australian Competition Tribunal of the Minister's decision not to declare the Victorian intra-state rail network, pursuant to Part IIIA of the Trade Practices Act.
- 2002** **Australian Competition and Consumer Commission**
Anti-competitive bundling or tying strategies
Prepared two (published) reports setting out an economic framework for evaluating whether the sale of bundled or tied products may be anti-competitive. These reports define the pre-conditions for such strategies to be anti-competitive, and discuss the potential role and pitfalls of imputation tests for anti-competitive product bundling.
- 2002** **Minter Ellison/SPI PowerNet**
Merger clearance
Advice on competition issues arising in the acquisition of energy sector assets in Victoria.
- 2001** **Gilbert + Tobin/AGL**
Gas market competition
Advised counsel for AGL in connection with the application by Duke Energy to the Australian Competition Tribunal for review of the decision by the National Competition Council to recommend that the eastern gas pipeline should be subject to price regulation under the national gas code.
- 2000** **One.Tel**
Competitive aspects of Mobile Number Portability
Advised on the competitive aspects of proposed procedures for Mobile Number Portability and whether these arrangements breached the Trade Practices Act in relation to substantial lessening of competition.
- 2000** **Baker & McKenzie/Scottish Power**
Impact of consolidation on competition
Expert report on the extent to which the acquisition of the Victorian electricity distribution and retail business, Powercor by an entity with interests in the national electricity market may lead to a 'substantial lessening of competition' in a relevant market.

Securities and Finance

- 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.
- 2013** **Sydney Water Corporation**
Cost of capital estimation
 Preparation of two 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.
- 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.
- 2012-13** **HWL Ebsworth/Confidential client**
Insider trading
 Expert advice and analysis in the context of criminal proceedings alleging insider trading in certain ASX-listed securities.
- 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

- 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.

- 2002-03** **ActewAGL**
Consumer willingness to pay
Directed a one year study of consumers' willingness to pay for a range of attributes for electricity, gas and water services in the ACT. This study involved the use of focus groups, the development of a pilot survey and then the implementation of a stated preference choice modelling survey of household and commercial customer segments for each utility service.
- 2002-03** **National Electricity Market Management Co**
Participant fee determination
Advice to NEMMCO in the context of its 2003 Determination of the structure of Participant Fees, for the recovery of NEMMCO and NECA's costs from participants in the national electricity market.

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.
- 2003-04** **Ministry of Finance, Thailand**
Framework for economic regulation
Lead a team advising on the detailed design and implementation of a framework for the economic regulation of the Thai water sector in order to support the proposed corporatisation and then privatisation of the Metropolitan Water Authority of Bangkok.

2003**Metrowater and Auckland City, New Zealand
Water industry reform options**

Report on alternative business models for the Auckland City water services supplier, Metrowater, in the context of proposals for structural reform elsewhere in the industry. This work examined the long term drivers of water industry efficiency and the costs and benefits of alternative structural reform options.

Sworn Testimony, Transcribed Evidence¹

- 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
- 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

¹ Past ten years.

- 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

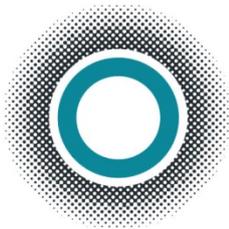
- Expert report and evidence to Victorian Appeal Panel, in the matter of the appeal by United Energy Distribution of the Electricity Price Determination of the Essential Services Commission**
Expert report, sworn evidence, 10 February 2006
- 2005**
- Expert evidence on behalf of Orion NZ, at the Commerce 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 Publications²

- 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
- GCR 3rd Annual Law Leaders Asia Pacific**
Role of Economists in Competition Law Enforcement in Asia-Pacific and
Speech, Singapore, 6 March 2014
- 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

² Past seven years

- 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**
Hypothetical breach of s46
Economic expert in mock trial, 20 October 2007
- Assessing the Merits of Early Termination Fees, *Economics of Antitrust: Complex Issues in a Dynamic Economy*, Wu, Lawrence (Ed)**
NERA Economic Consulting 2007
- Assessing the Impact of Competition Policy Reforms on Infrastructure Performance**
ACCC Regulation Conference
Speech, Gold Coast, 27 July 2007



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