

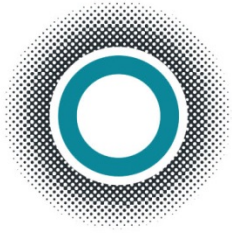
Evaluation of ERA's Draft Decision of ATCO's Depreciation allowance, Greg Houston, HoustonKemp November 2014

Appendix 11.1

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





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Evaluation of ERA's Draft Decision on ATCO's Depreciation Allowance

A report for Johnson Winter & Slattery

26 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 review certain aspects of the 14 October 2014 draft decision (the draft decision) of the Economic Regulation Authority of Western Australia (the ERA) in relation to 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 particular aspect of the ERA's draft decision that JWS has asked me to consider its proposed approach to determining the depreciation building block to be applied in the revised access arrangement. Specifically, JWS has asked that I prepare a report that:

- considers the ERA's inclusion of two "Inflationary Gain" components – being the Return on Projected Capital Base and Return on Working Capital – to be deducted from the total revenue building blocks, as presented at Table 4 of its draft decision, the ERA's reasoning for the inclusion of such a building block, and provides my opinion on whether that approach complies with the Rules;
- responds to the ERA's reasons for finding that the analysis set out in my March 2014 report in respect of the long term projections of LRMC is "flawed";
- responds to the ERA's analysis of the likely LRMC for ATCO Gas, as set out in paragraphs 1017 to 1029 of its draft decision; and
- having regard to the above, provides my opinion on whether:
 - > the adoption of an indexed asset base or an unindexed asset base – along with the corresponding adjustment needed to offset the inflationary gain – meets the requirements of Rule 89(1)(a); and
 - > the transition approach to an unindexed asset base – along with the corresponding adjustment needed to offset the transitional inflationary gain – as proposed by ATCO Gas better meets the requirements of Rule 89(1)(a), as compared with an indexed asset base approach.

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.

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, Brendan Quach 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 discuss the ERA's draft decision to deduct an amount from the rate of return building block in order to offset an 'inflationary gain' otherwise occurring in its application of the building block approach, and explain the requirements of the rules in relation to the five total revenue building blocks specified at rule 76;
- in section 3 I explain the rule 89 criterion for determining the depreciation schedule to be applied in an access arrangement and the principal methodological choices that fall to be evaluated under rule 89;
- in section 4 I summarise the analysis presented by the ERA in support of its draft decision to index the capital base, and so to apply indexed straight line depreciation, rather than to accept ATCO Gas' proposal to transition from the continued indexation of its capital base to the adoption of an unindexed capital base with straight line depreciation;
- in section 5 I respond of the ERA's analysis of the likely LRMC for ATCO Gas, and provide my opinion on the whether the indexed or unindexed asset base approaches to depreciation meet the requirements of rule 89(1)(a), and whether the transition approach to an unindexed asset base as proposed by ATCO Gas better meets the requirements of rule 89(1)(a), as compared with an indexed approach; and
- finally, section 6 contains my declaration, in accordance with the Guidelines.

2. 'Inflationary Gain' and the NGR

In this section I discuss the ERA's draft decision to deduct an amount from both the 'return on projected capital base' and 'return on working capital' elements of the rate of return building block, in order to offset an 'inflationary gain' otherwise occurring in its application of the building block approach. The deduction made by the ERA is set out in Table 4, at page 20 of the draft decision.

I also discuss the economic linkage between the existence of an inflationary gain and the ERA's draft decision to apply annual CPI indexation to its approved projected capital base, as indicated at Table 41 of the draft decision, and the requirements of the rules in relation to the five total revenue building blocks specified at rule 76.

2.1 The total revenue building blocks

Rule 76 specifies that total revenue is to be determined for each year of an access arrangement period using the building block approach, including the individual building blocks and those elements of the rules that detail the basis on which they are to be determined, ie:

Total revenue is to be determined for each regulatory year of the access arrangement period using the building block approach in which the building blocks are:

- (a) a return on the projected capital base for the year (See Divisions 4 and 5); and
- (b) depreciation on the projected capital base for the year (See Division 6); and
- (c) the estimated cost of corporate income tax for the year (See Division 5A); and
- (d) increments or decrements for the year resulting from the operation of an incentive mechanism to encourage gains in efficiency (See Division 9); and
- (e) a forecast of operating expenditure for the year (See Division 7).

Although not legally trained, my substantial experience in applying the building block approach so as to determine maximum prices or revenues for the provision of infrastructure-based services indicates to me that rule 76 is specified definitively and completely. In other words, it identifies all of the elements that are necessary to apply the building block approach as understood by regulatory economists, without omission or the need to provide for further, essential elements.

Having established a total revenue amount for each regulatory year of the access arrangement period by reference to the five building blocks identified in rule 76, rule 92(2) provides for the determination of reference tariffs by reference to that projected total revenue. Rule 92(2) imposes a particular, fundamental condition on this process, being that:

The reference tariff mechanism must be designed so as to equalise (in terms of present values):

- (a) forecast revenue from reference services over the access arrangement period; and
- (b) the portion of total revenue allocated to reference services for the access arrangement period.

Although not explicitly identified as such by the ERA, it is the existence of this net present value condition that – in certain circumstances – causes the existence of an 'inflationary gain' amount that must be netted off one or other of the building blocks in order for the rule 92(2) requirement to be satisfied.

In the following section, I discuss the circumstances that give rise to the existence of an 'inflationary gain', and so the particular building block element from which a corresponding amount should be deducted.

2.2 Inflationary gain arises from indexation of the capital base

I discuss in section 2.3 below that the ERA attributes the existence of an 'inflationary gain' to the requirement under rule 87(4)(b) that the allowed rate of return is to be determined on a nominal, vanilla basis. In my opinion, this particular conclusion is a significant mischaracterisation of the way in which the rules provide for the building block approach to be applied, and is inconsistent with the ERA's own application of the building block approach under rule 76.

Rule 76 requires the ERA to determine five separate building blocks that, together, comprise total revenue in each regulatory year. By definition, the existence of an inflationary gain must derive from decisions made in relation to one or other of these five building blocks.

My review of the ERA's draft decision shows that the existence of an inflationary gain arises in relation to building block 76(a) – the return on the projected capital base for the year. In particular, at Table 41 on page 128 of its draft decision, the ERA sets out its approved 'projected capital base', which forms one of two components identified in building block 76(a). Table 41 lists the derivation of the projected capital base, one of which is a line item entitled "Inflation". In the accompanying text, the ERA explains this item as being:

...the inflation adjustment used to calculate total revenue (paragraph 92).¹

The derivation of this amount is then further explained at paragraph 551, where the ERA states;

The Opening Capital Base (end of period) values, and the other values set out in Table 41, are derived by indexing the real values in Table 40 to current cost terms, consistent with the rate of inflation as measured by the CPI All Groups, Weighted Average of Eight Capital Cities, as at 31 December in each regulatory year.²

The consequence of the ERA's draft decision to apply inflation indexation to the end of period values for the capital base in each year gives rise to a double counting of the allowance for inflation, since rule 87(4)(b) requires the ERA to adopt a nominal (and so, inflation inclusive) rate of return when determining the other element of building block 76(a).

It is helpful at this point to highlight that, although the ERA's draft decision is to index the projected capital base each year to account for inflation, the rules do not require such an approach to be adopted. In fact, the rules are silent on the question of whether or not to adopt an indexed capital base. In particular, the capital base roll forward provisions at rule 78 neither require, prevent nor explicitly recognise that annual, inflation indexation may be applied to the capital base.

However, in relation to the depreciation building block, rule 89(1)(d) acknowledges that – in applying the roll forward provisions at rule 78 – the capital base may be indexed for the effect of consumer price inflation (CPI). Rule 89(1)(d) states that:

'The depreciation schedule should be designed... so that (subject to the rules about capital redundancy), an asset is depreciated only once (ie that the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base (adjusted, if the accounting method approved by the AER permits, for inflation)).

Put another way, although the possibility that the capital base may be indexed is acknowledged in the rules, there is neither any explicit guidance as to whether or not to adopt that course, nor any particular evaluation criteria that should be applied.

By contrast, the rules relating to the rate of return, which are in turn applied to determine the return on projected capital base building block (rule 76(a)), prescribe an approach that explicitly incorporates the effect

¹ ERA, draft decision, page 128, para 550

² ERA, draft decision, page 128, para 551

of inflation. In particular, rule 87(4)(b) requires the allowed rate of return to be determined on a nominal basis, thereby incorporating an allowance for the inflation in investor returns on the project capital base.

If a decision is taken to index the projected capital base for annual inflation and so an adjustment must be made for the ensuing 'inflationary gain', this inflationary gain must be subtracted from one of the five building blocks prescribed by rule 76. Since the inflationary gain does not arise from either corporate income tax (building block item c), the operation of an incentive mechanism (building block item d), or operating expenditure (building block item e), it must therefore be removed from either:

- the rate of return element of building block item a);³ or
- the depreciation component, being building block item b).

However, of these two choices for adjusting for the inflationary gain, deducting an allowance for inflation from this building block would violate rule 87(4)(b), requiring the use of a nominal rate of return. It follows that the only remaining 'candidate' building block from which an inflationary gain can be subtracted is the depreciation building block.

This interpretation of how the rules are to be applied is consistent with the non-prescriptive nature of the rules in relation to the depreciation element, which is to be decided by reference to the criteria at rule 89(1) and (2). It is also consistent with the decision of the Australian Competition Tribunal, which stated that:⁴

Whether or not asset values are indexed will affect the quantum of the depreciation allowance.

In the following section, I discuss the ERA's attribution of the cause of the inflationary gain as being the consequence of the requirement that it adopt a nominal rate of return, as distinct from its own, optional, draft decision to apply annual indexation in its projected capital base.

2.3 ERA incorrectly attributes the 'cause' of the inflationary gain

The ERA correctly identifies that an inflationary gain amount needs to be removed from the return on capital building block in order to avoid double counting for the effect of inflation. However, the ERA is incorrect when it states that its subtraction of:

...an inflationary gain amount to remove the double counting of inflation in each year...is a result of Rule 87(4) of the NGR, as it requires the application of a nominal rate of return. This change to a nominal rate of return results in an inflationary gain, when a nominal rate is used to compute the return on the nominal capital base. [my emphasis]

Further, the Authority also states that:

The Authority considers that the inflationary gain relates to the return on asset rather than nominal depreciation. The Authority treats the inflationary gain as a separate item in the revenue building block rather than offsetting depreciation of the return on asset.

In my opinion, the ERA is in error both:

- to identify the cause of the inflationary gain as being the rule 87(4) requirement to adopt a nominal rate of return; and
- to subtract the inflationary gain from the return on capital base building block.

³ I note that removing the inflationary gain from the projected capital base element of building block item a) would amount to the reversal of the projected capital base indexation decision in the first asf

⁴ Australian Competition Tribunal, Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT 8, paragraph 167.

In contrast to the Authority's reasoning, both economic logic and the structure of the rules support the conclusion that the 'cause' of the inflationary gain is the Authority's decision to index the projected capital base, ie, in the absence of a decision to index the capital base, rule 87(4) does not require any adjustment to any building block. Rather, it is the exercise of the Authority's discretion to index the capital base that gives rise to a double count for inflation that would otherwise not occur.

Further, by applying the adjustment to the inflationary gain to the rate of return component of the return on capital base building block, the ERA would appear not to be complying with rule 87(4), since to net out an allowance for inflation from the rate of return element has the effect of no longer applying a nominal rate of return.

To summarise, the ERA's draft decision to subtract an inflationary gain from the return on capital building block:

- is predicated on an incorrect attribution of the cause of the inflationary gain to the requirement in rule 87(4) to determine the rate of return on a nominal basis; and
- does not comply with the requirement in rule 87(4) to calculate the allowed rate of return on a nominal basis;

In my opinion, having regard to the structure and interaction of the various rules I discuss above as well as their underlying economic logic, the adjustment for the inflationary gain should be made by means of the depreciation building block.

Notwithstanding the ERA's error in mischaracterising the basis and labelling of its decision to deduct an amount for inflationary gain, in its draft decision the ERA engages in significant detail in relation to its interpretation and application of Rule 89(1)(a) on the design of a depreciation schedule, even though the principal distinction between the Authority and ATCO's effective depreciation schedule is the presence of an adjustment to the depreciation allowance for an inflationary gain.⁵

I review the issues arising in the application of rule 89(1)(a) and the ERA's assessment and application of this rule in the following sections 3 and 4.

⁵ 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, paragraphs 1003 to 1038.

3. Depreciation Methods

The rules do not prescribe any particular method that should be applied to derive the depreciation component of the rule 76 building blocks. Rather, rule 89 sets out criteria for determining the depreciation schedule to be applied in an access arrangement.

Importantly, since gas pipeline assets typically have economic lives that extend over many decades, a decision on the depreciation method to be adopted in any particular year or regulatory period has implications for reference tariffs over many subsequent access arrangement periods. In this section I discuss the principal methodological choices that fall to be evaluated under rule 89.

3.1 Depreciation methodologies

The depreciation schedule adopted by the ERA in its draft decision is derived on a materially different basis from that proposed by ATCO Gas in its revised access arrangement. As a matter of principle, the difference between the two approaches arises from the threshold question as to whether or not the projected capital base should be indexed for the effects of inflation, as measured by the consumer price index (CPI). The effect of such indexation is to adjust the capital base in each year for the effect of inflation on the purchasing power of money, so that the value of the capital base (before adjustment for new capital expenditure or depreciation) is constant in inflation adjusted terms.

I noted in section 2.2 that the rules neither require, prevent nor explicitly recognise that indexation may be applied to the capital base, although rule 89(1) acknowledges that such a decision may be made.

Although neutral in net present value terms over the life of each asset, the decision as to whether or not to index the capital base has implications for the method used to determine the depreciation schedule in each year. The Australian Competition Tribunal (ACT) recognised that the depreciation method used is ultimately determined by a separate decision as to whether or not to index the capital base when it stated that:

'The depreciation allowance may be calculated using indexed (real) or unindexed (nominal) values for the asset base. Whether or not the asset values are indexed for inflation will affect the quantum of the depreciation allowance.'

A decision to index the capital base necessitates an adjustment to the depreciation allowance in each year of the total revenue calculation, because rule 87(4) requires the rate of return to be determined and applied on a nominal basis. A nominal rate of return is determined by evidence drawn directly from capital markets, and without any netting off of the implied component that compensates investors for anticipated consumer price inflation. Applying a nominal rate of return to a projected capital base that has been indexed for inflation causes the effect of inflation to be double-counted and, in the absence of an adjustment to the allowance for depreciation, would cause a service provider to be overcompensated, and the net present value condition at rule 92(2) not be met.

The ERA's draft decision to index the projected capital base for changes in the CPI therefore requires a corresponding amount to be deducted from the nominal depreciation allowance in each year so as to avoid the consequent 'inflationary gain'. In contrast, ATCO proposed a depreciation method that involved the transition to straight line depreciation on an unindexed capital base over a ten year period to 2024, and its full adoption thereafter.

Given that, once properly characterised, the ERA's depreciation method is applied in conjunction with an indexed capital base, I refer to these methods, respectively, as 'indexed straight line depreciation' and 'straight line depreciation'. It is helpful to note that both methods are equivalent in present value terms, but result in different time profiles of total revenue, because of their varying effects on the 'return on projected capital base' and 'depreciation' building blocks identified at rule 76.

3.2 Straight line depreciation (unindexed capital base)

Straight line depreciation sets the allowance for depreciation over the economic life of an asset so as to be equal in current or prevailing price terms in each year of an asset's, or asset group's, projected economic life. Importantly, straight line depreciation is not applied in conjunction with any annual indexation adjustment to the capital base to account for the effect of CPI.

By way of example, consider a \$1,000 investment in an asset that has a five year economic life, whereby the rate of inflation is 2.5 per cent and the applicable, nominal rate of return is nine per cent. Figure 1 illustrates the calculation of the capital base, the return of capital or depreciation, and the return on capital where the capital base is not indexed and so straight line depreciation is applied in conjunction with a nominal rate of return.

Figure 1 The capital base and capital income with a nominal WACC and an unindexed capital base

	Year				
	1	2	3	4	5
Opening capital base	1000	800	600	400	200
Nominal Depreciation	200	200	200	200	200
Closing capital base	800	600	400	200	0
Return of capital (nominal depr.)	200	200	200	200	200
Return on capital	90	72	54	36	18
Capital income	290	272	254	236	218
NPV (at the rate of return)	\$1,000				

3.3 Indexed straight line depreciation (indexed capital base)

Indexed straight line depreciation is applied to avoid a double count for inflation when:

- a decision is made to index the capital base for the effect of changes in the CPI; and
- a nominal rate of return is applied.

In contrast to straight line depreciation, indexed straight line depreciation sets a different nominal allowance for depreciation in each year so that the amount is equal in constant price or inflation adjusted terms, before then being subjected to a deduction for the corresponding inflationary gain. In other words, indexed straight line depreciation calculates the allowance for depreciation in a particular year so as to be equal to:

1. the opening value of the capital base divided by its remaining asset life; less
2. the amount by which the opening capital base is indexed for inflation in that year.

The removal of the amount by which the capital base is adjusted for inflation is required to avoid the double counting for inflation that occurs when a nominal (ie, inflation inclusive) rate of return is applied to an indexed (ie, inflation inclusive) capital base.

By way of example, consider the same example used in Figure 1, but with an indexed capital base and so indexed straight line depreciation.

Figure 2 The capital base and capital income with a nominal WACC and an indexed capital base

	Year				
	1	2	3	4	5
Opening Capital Base	1000	820	630	431	221
Inflationary gain	25	21	16	11	6
Nominal depreciation	205	210	215	221	226
Closing Capital base	820	630	431	221	0
Return of capital (real depr.)	180	190	200	210	221
Return on Capital	90	74	57	39	20
Capital Income	270	263	256	249	241
NPV (at the rate of return)	\$1,000				

3.3.1 Depreciation and revenue profile

Figure 3 below shows the time profile of depreciation and capital related revenue, ie, the sum of the return on capital and depreciation, under straight line depreciation and indexed straight line depreciation in the illustrative examples in Figures 1 and 2.

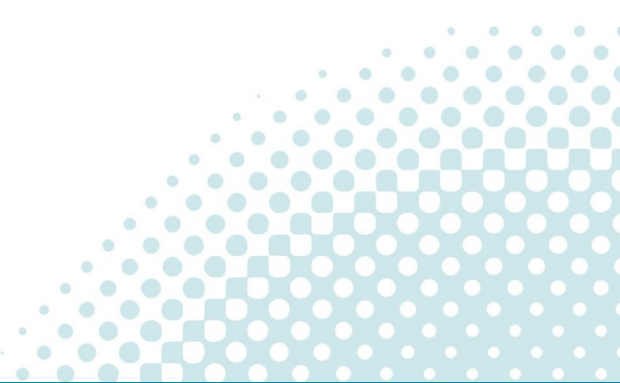
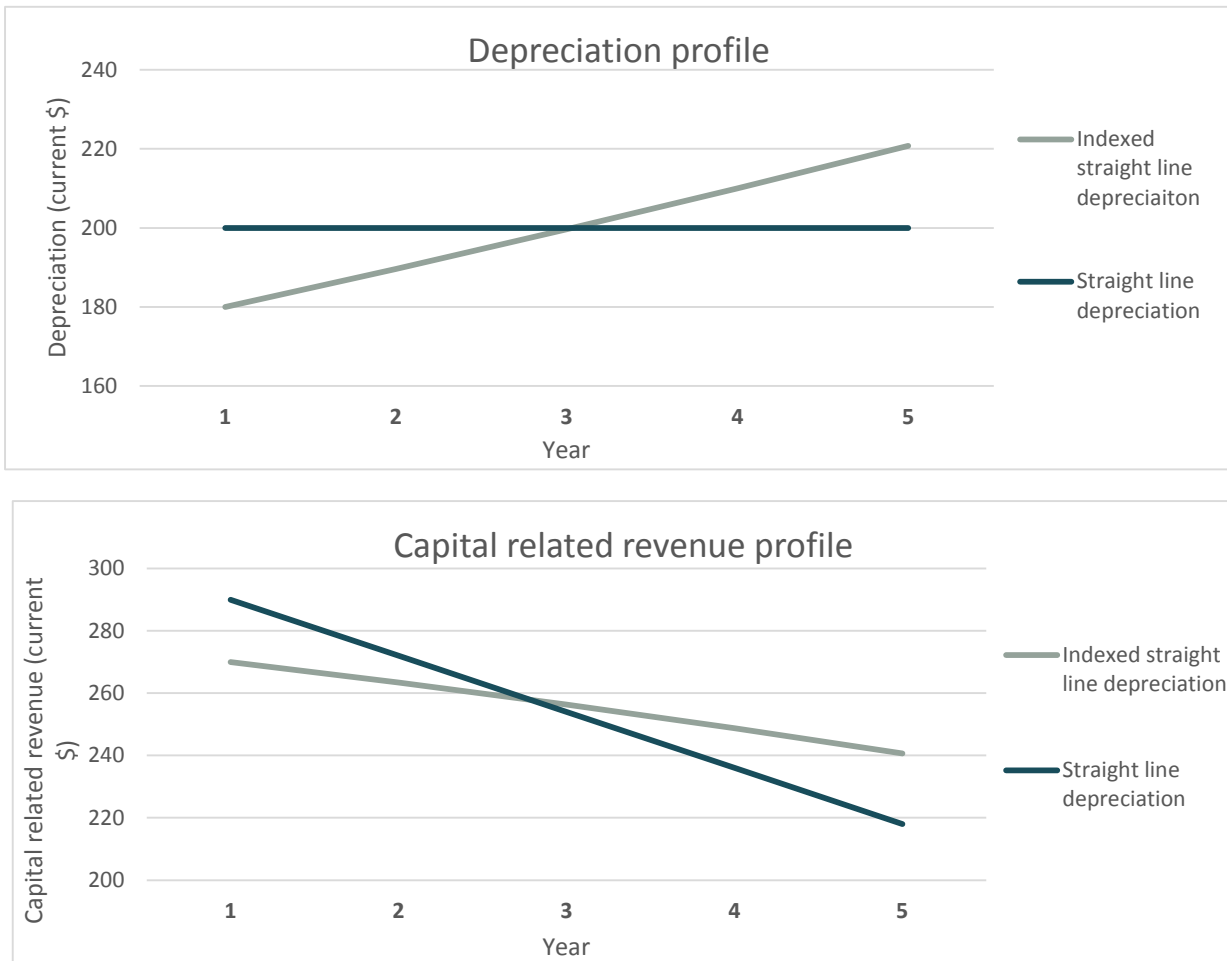


Figure 3 Illustrative depreciation and capital related revenue profiles



The examples in Figures 1 and 2 show that indexed straight line depreciation, as compared with straight line depreciation, results in:

- lower allowances for depreciation in earlier years and higher allowances in later years; and
- lower capital related revenues in earlier years and higher capital related revenues in later years.

It is helpful to note that an indexed capital base with indexed straight line depreciation and an unindexed capital base with straight line depreciation will each give rise to total revenue streams over all regulatory periods applicable to the life of any particular asset that are equivalent in NPV terms. However, the time profile of depreciation and capital related revenues that will ultimately be affected by the decision as to whether or not to index the capital base, and so the appropriate method for determining the depreciation schedule.

To summarise, it is important to recognise that selecting a method to determine the depreciation schedule is not necessarily a choice in itself but, rather, the depreciation methodology applied is a product of a separate decision as to whether the capital base should be indexed. In other words:

- a decision to index the capital base necessitates the application of indexed straight line depreciation; and
- a decision not to index the capital base enables the application of straight line depreciation.

3.4 Terminology

The ERA refers throughout its draft decision to straight line depreciation as the historical cost accounting (HCA) method and indexed straight line depreciation as the current cost accounting (CCA) method. In my opinion, these labels are unhelpful. Rather, throughout my report I find it more accurate and enlightening to use the terms:

- 'indexed straight line depreciation' instead of CCA; and
- 'straight line depreciation' instead of HCA.

The terms HCA and CCA are not helpful because – notwithstanding the implied suggestion in these terms – ATCO is not proposing to use the historical (acquisition) cost for existing assets as the basis for determining depreciation and, similarly, the ERA is not proposing to use modern day equivalent costs of existing investments as the basis for determining depreciation.

Rather, these two methodologies are distinguished by whether or not they are implemented in conjunction with an indexed capital base, and so I adopt terminology that reflects this distinction.

4. ERA's Draft Decision

In this section I summarise the analysis presented by the ERA in support of its draft decision to index the capital base, and so to apply indexed straight line depreciation, rather than to accept ATCO Gas' proposal to transition from the continued indexation of its capital base and corresponding adoption of indexed straight line depreciation, to the adoption of an unindexed capital base with straight line depreciation.

The ERA rejects ATCO's proposed approach on the basis that it does not comply with rule 89(1)(a), which requires that:⁶

'The depreciation schedule should be designed... so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services.'

4.1 Promoting efficient growth in the market

The ERA appears to accept the proposition set out in my March 2014 report that:⁷

'... the depreciation schedule that best promotes efficient growth in the market for reference services (as required by rule 89(1)(a)) will be that which minimises the extent of departure from LPMC pricing caused by the need to recover sufficient revenues.'

Indeed, in a reference to the same principle, the Australian Competition Tribunal (the Tribunal) noted that:⁸

'There is substantial agreement about what is required in terms of tariff paths to promote efficient growth in the market for reference services.'

However, the substance of the Tribunal's final decision reflected the particular circumstances of APA GasNet at that point in time, ie, APA GasNet's particular LPMC and tariff forecasts. For ATGO Gas, the evaluation of this same principal requires an assessment of the particular circumstances applying to ATCO Gas.

4.2 Long run marginal cost and average prices

ATCO Gas proposed to transition from an indexed capital base with indexed straight line depreciation to an unindexed capital base with straight line depreciation on the basis of an expert report prepared for JWS by myself and my then NERA colleagues (my earlier report). My earlier report analysed and compared a projected trend for LPMC and ATCO Gas' then forecasts of average prices.

4.2.1 Revenue per unit of output

In my earlier report I assessed revenue per gigajoule and per connection over time, under both an indexed capital base with indexed straight line depreciation and an unindexed capital base with straight line depreciation, using expenditure forecasts provided by ATCO. I found that, under both approaches, revenue per gigajoule and per connection is increasing through time.

However, the ERA rejected my analysis on the basis that the capital expenditure forecasts provided to me by ATCO incorporated too rapid a growth in capital expenditure. The ERA revises the expenditure forecasts provided by ATCO to incorporate the approved 2015 to 2019 capital expenditure in its draft decision and, from 2020 onwards, an assumption that capital expenditure will grow at the same rate as new connections.

⁶ NGR, rule 89(1)(a)

⁷ NERA, Depreciation Options for ATCO Gas, Expert Report of Gregory Houston, 13 March 2014, page 11.

⁸ Australian Competition Tribunal, Application by APA GasNet Australia (Operations) Pty Limited (No 2) [2013] ACompT 8, paragraph 217.

The ERA concludes that the lower capital expenditure assumptions result in a materially different time profile of revenue per gigajoule under both ATCO's proposed approach and that applied in the ERA's draft decision.

However, my examination of the ERA's analysis of projected average prices shows that it is internally inconsistent and, further, when corrected, results in a materially different time profile of average prices. Importantly, this finding has significant implications for the compliance of the ERA's draft decision with rule 89(1)(a). I discuss this in more detail in section 5.

4.2.2 Long run marginal cost trend

In my earlier report, I drew on time series data published by the Australian Bureau of Statistics to establish a measure of the inflation adjusted price of capital expenditure and the inflation adjusted price of labour – as a proxy for operating costs – and found evidence that the long term trend is for LRMC to fall.

The data published by the ABS, and used by me to measure the inflation adjusted price of capital expenditure, relate to total capital expenditure aggregated for a number of industries. In the course of its assessment of ATCO Gas' proposed access arrangement, the ERA acquired unpublished data from the ABS that relate specifically to the 'electricity, gas, water and waste' industry from 1987 to 2013. Using these data, the ERA concludes that:

- from 1987 to 1994, the trend in LRMC was relatively flat;
- from 1995 to 2003, LRMC was in a downward trend, which it attributes to unspecified 'microeconomic reforms' that took place in the industry during this period; and
- from 2003 to 2013, the LRMC trend reverted to that prior to 1995, ie, flat to slightly increasing.

With reference to its analysis, the ERA observes that:

'the overall trend for the electricity, gas, water and waste price index, and hence LRMC, is flat or even slightly increasing.'⁹

'evidence relating to the trend for the LRMC of gas services does not support the conclusion that it will decline strongly in future, but may even remain flat in real terms.'¹⁰

'Given potential outcomes for LRMC – of flat or at most slightly declining costs over time...'¹¹

Notwithstanding the above observations, the ERA goes on to conclude that:

'Given potential outcomes for LRMC – of flat or at most slightly declining costs over time – the CCA approach [an indexed capital base and indexed straight line depreciation] could provide for a superior approach in terms of signalling efficient use over time, as compared to HCA [an unindexed capital base and straight line depreciation]'¹²

I comment on the ERA's analysis of the trend in LRMC in section 5.1.

⁹ 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 1027.

¹⁰ 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 1015.

¹¹ 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 1028.

¹² 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 1028.

4.3 Other Considerations

The ERA appears to accept the principle that the depreciation schedule that best promotes efficient growth in the market, as required by rule 89(1)(a), will be that which minimises the extent of departure from LRMC.¹³ Nevertheless, the ERA introduces additional considerations concerning the existence of price shocks and the likely effect of one depreciation methodology over another on the efficiency of future capital expenditure.

4.3.1 Price shocks

The ERA contends that the adoption of an unindexed capital base would result in substantial price increases in the short to medium term without any justification on efficiency grounds, and so would:

- imply a subsidy from current customers to future customers;¹⁴ and
- discourage demand in the short term.¹⁵

4.3.2 Potential inefficiency

The ERA's pricing model indicates that average prices will be relatively higher in the short term under an indexed capital base and straight line depreciation approach, and contends that, consequently, it will result in:¹⁶

- potential inefficient use of the assets of upstream and downstream users during that time; and
- potential inefficient investment by upstream and downstream users; and
- potential inefficient investment in the pipeline itself.

Further, the ERA states that ATCO's proposed approach will lead to inefficient replacement of existing assets, because it gives rise to a relatively lower value of the capital base in later years and, consequently, an incentive to replace assets sooner than may otherwise have been the case.¹⁷

4.4 ERA's conclusion

Having regards to its critique of my earlier analysis, the ERA rejects ATCO's proposed transition to an unindexed capital base with straight line depreciation on the basis that it is not consistent with rule 89(1)(a), because:

- prices are likely diverge to a greater extent from LRMC, as compared with an indexed capital base and indexed straight line depreciation;¹⁸
- it will lead to unnecessary price shock in the near term;¹⁹ and
- it will act to discourage efficient management of pipeline assets.²⁰

¹³ 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, paragraphs 1017 to 1029 and paragraph 1038.

¹⁴ *Op cit*, para 1030.

¹⁵ *Op cit*, paragraph 1038.

¹⁶ *Op cit*, paragraph 1038

¹⁷ *Op cit*, paragraph 1036

¹⁸ *Op cit*, paragraph 1038.

¹⁹ *Op cit*, paragraph 1038 and 1030 to 1032.

²⁰ *Op cit*, paragraph 1038 and 1033 to 1037.

5. Revised Analysis of Tariffs and LRMC

In this section I address the particular questions put to me in relation to the analysis and reasoning underpinning the ERA's draft decision. In particular, I:

- respond to the ERA's reasons for finding that the analysis set out in my March 2014 report in respect of the long term projections of LRMC is "flawed"; and
- respond to the ERA's analysis of the likely LRMC for ATCO Gas, as set out in paragraphs 1017 to 1029 of its draft decision; and
- having regard to the above, provide my opinion on whether:
 - > the adoption of an indexed asset base or an unindexed asset base – along with the corresponding adjustment needed to offset the inflationary gain – meets the requirements of Rule 89(1)(a); and
 - > the transition approach to an unindexed asset base – along with the corresponding adjustment needed to offset the transitional inflationary gain – as proposed by ATCO Gas better meets the requirements of Rule 89(1)(a), as compared with an indexed asset base approach.

At the outset, I note that much of the ERA's analysis is concerned with its assessment of the prevalent or *most likely trend* in LRMC. However, in the assessment as to whether a particular depreciation schedule gives rise to a time profile of reference tariffs that best promotes efficient growth in the market for reference services, the important question is the extent of departure (ie, the gap) between the level of LRMC and average prices, over the life of the relevant assets.

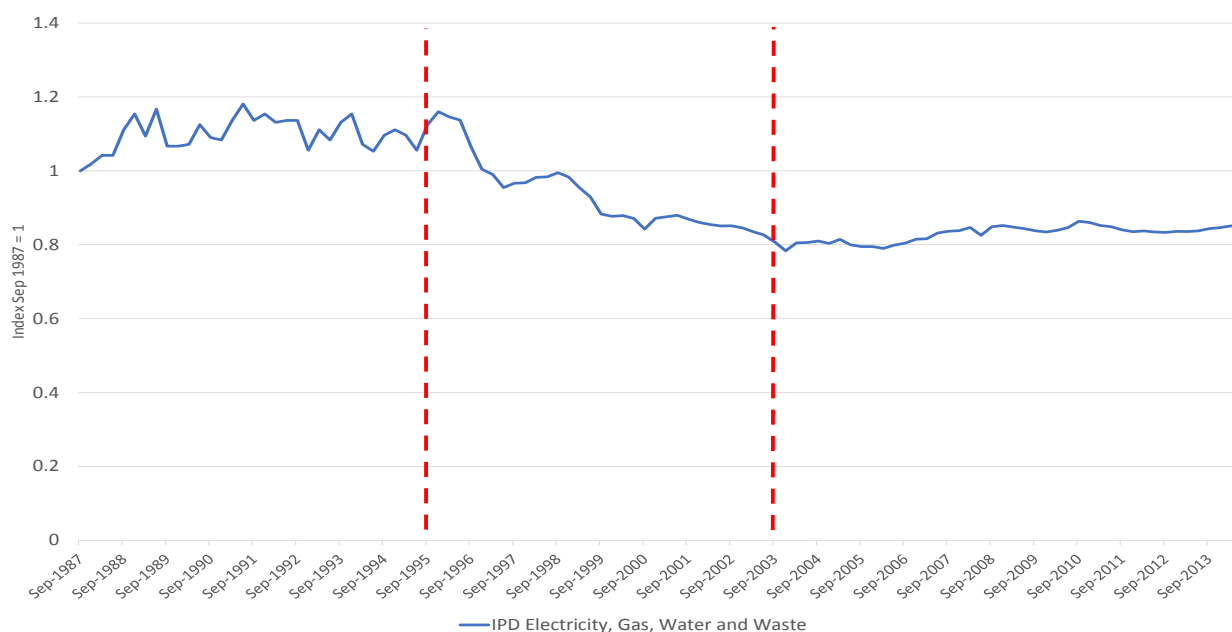
Further, it is important to emphasise that the criterion set out in rule 89(1)(a) implies an evaluation not in relation to the forthcoming regulatory period in particular but, rather, over the entire economic life of the relevant assets. It follows that the assessment required to be undertaken by reference to rule 89(1)(a) must compare LRMC and reference tariffs over a relatively long period. Consistent with this requirement, the analysis I set out below and, indeed, that of the ERA in its draft decision, extends to 2080.

5.1 Long run marginal cost

I explain in section 4.2.2 that the ERA acquired unpublished data from the ABS so as to estimate implicit capital price deflators for the 'electricity, gas, water and waste' industry. I agree that this narrower data set – which was not available to me – can be presumed to provide a better reflection of historic trends in the price of capital inputs for gas pipeline services.

The ERA's analysis of this historical data series characterises the trend in LRMC between 1987 and 2013 as involving three distinct periods, as delineated by the red vertical lines in Figure 4 below.

Figure 4 The ERA's capital implicit price deflator (IPD) for the electricity, gas, water and waste industry from 1987 to 2014



Having regard to the capital implicit price deflator illustrated in Figure 4 above, the ERA states its view that:²¹

- from 1987 to 1994, the trend in LRMC was relatively flat;
- from 1995 to 2003, LRMC was in a downward trend, which reflects the microeconomic reform in the industry; and
- from 2003 to 2013, the LRMC trend reverted to that prior to 1995 with a flat to slightly increasing trend.

In other words, the ERA attributes the downward trend from 1995 to 2003 to the microeconomic reform of that era and contends that, in the absence of further microeconomic reform, the LRMC trend will reflect that between 1987 to 1994 and 2003 to 2013.

In my opinion, these contentions reflect an unnecessarily pessimistic view of the potential for future productivity gains in this relatively capital intensive sector of the economy. In particular, the period from 2005 onwards – for which the ERA contends²² input prices halted their downward trend because of absence of microeconomic reform – coincided with an unprecedented mining boom,²³ which is likely to have put significant upward pressure on capital input prices.

Taking account of this wider perspective, in my opinion a best estimate of the future trend in LRMC is more likely to involve decline from current levels, of a form similar to that in the period 1995 to 2003. The resumption of this trend is more consistent with the ramping down of the mining-led investment boom, and its associated upwards pressure on capital prices.

²¹ 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 1027.

²² 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 1027.

²³ Reserve Bank of Australia, Mining Booms and the Australian Economy, Address to the Sydney Institute, Speech, 23 February 2010

Notwithstanding, the ERA's precise interpretation of the historic trend data for the purposes of forming a view on the future trend in LRMC²⁴ is nebulous. For example, the ERA indicates its sympathy with a range of potential LRMC trends, stating that:

'... the overall trend for the electricity, gas, water and waste price index, and hence LRMC, is flat or even slightly increasing.'²⁵

'evidence relating to the trend for the LRMC of gas services does not support the conclusion that it will not decline strongly in future, but may even remain flat in real terms.'²⁶

'Given potential outcomes for LRMC – of flat or at most slightly declining costs over time...' ²⁷

'It is entirely feasible, given the relatively mature nature of gas pipeline technology, that LRMC could remain flat.'²⁸

5.1.1 Best estimate of LRMC

In my opinion, the most robust capital price input data presented in the context of the decision-making process for the forthcoming regulatory period are:

- the unpublished data from the ABS that the ERA uses to calculate the capital implicit price deflator for the electricity, gas, water and waste sector;²⁹ and
- the labour cost measures presented in my earlier report, as a proxy for operating expenditure.³⁰

My earlier analysis of labour costs, as a proxy for operating expenditure, indicates that the cost of operating expenditure may rise slightly over time.

The ERA's interpretation of the capital implicit price deflators presented in its draft decision, which I reproduce in Figure 4 above, contends that productivity improvement is the only determinant of such trends and, further, implicitly assumes there will be no further productivity gains in the gas sector. In my opinion, these are both unrealistic propositions.

Further, the last decade – during which the capital implicit price deflator has been stable – coincides with a mining investment boom of unprecedented scale, the likely effect of which was to put significant upwards pressure on capital prices across a number of sectors. On these considerations, in my opinion the best estimate of the likely trend in the prices of inputs that make up LRMC is a resumption of the decline seen from 1995 to 2003, since this is consistent with the mining boom ramping down and the reasonable prospect of further productivity gains being achieved in the sector.

Further still, I described in my earlier report that a long term decline in LRMC is consistent with the 'in principle' conclusion that can be drawn from the economic relationships that underpin long term trends in economic growth, ie:³¹

²⁴ The ERA describes the LRMC trend as 'flat or even slightly increasing'

²⁵ 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 1027.

²⁶ 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 1015.

²⁷ *Op cit*, paragraph 1029.

²⁸ *Op cit*, paragraph 1028.

²⁹ *Op cit*, Figure 38, page 231.

³⁰ NERA, Depreciation Options for ATCO Gas, Expert Report of Gregory Houston, 13 March 2014, page 22 to 25.

³¹ NERA, Depreciation Options for ATCO Gas, Expert Report of Gregory Houston, 13 March 2014, page 19.

'... the unit price of capital assets can be expected to fall over time, relative to economy-wide consumer prices. By contrast, the unit cost of labour and land can be expected to rise over time, relative to economy-wide consumer prices.'

For these reasons, in my opinion LRMC is likely to decrease in future years and, at its most conservative, to be relatively stable. Notwithstanding, for the purpose of the comparisons of LRMC and average prices through time that I undertake below, I adopt the highly conservative assumption that LRMC will be constant in future years.

5.2 Revenue per unit

The ERA conducts its own analysis of average prices, ie, revenue per gigajoule, by reference to an unindexed capital base with straight line depreciation, and an indexed capital base with indexed straight line depreciation, and find that average prices will fall under both approaches.

However, my review of the ERA's analysis shows it to involve significant internal inconsistencies that, once corrected, result in materially different average prices from 2015 to 2080.

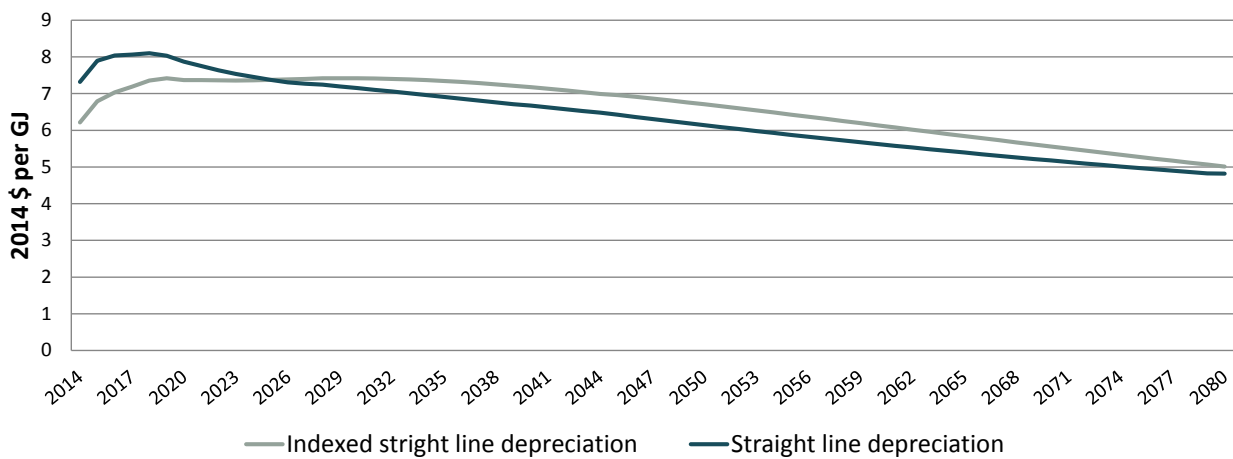
5.2.1 The ERA's analysis

The ERA conducts an analysis of revenue per unit that incorporates:

- capital expenditure over the 2015-2019 period consistent with the draft decision;
- capital expenditure growth from 2020 onwards consistent with my earlier report's assumed rate of new connections, ie, 2.5 per cent tailing down to 2 per cent in 2030 and 1 per cent in 2080;³² and
- gas volumes driven by the same number of new connections each year used in my earlier analysis.

Figure 5 below illustrates the average prices calculated by the ERA.

Figure 5 The ERA's analysis of total revenue per gigajoule in constant prices



³² 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 1019. I note that the pricing model provided by the ERA grew capital expenditure by the rate of population growth in Western Australia, as forecast by the ABS.

Drawing on the outputs of this analysis, the ERA concludes that both an unindexed capital base with straight line depreciation and an indexed capital base with indexed straight line depreciation give effect to a declining trend in revenue per unit over time.³³

5.2.2 Internal inconsistency in the ERA's analysis

By reducing capital expenditure, as compared with that used in the model underpinning my earlier work, but using the same new connection assumptions adopted in my earlier report (which relate to materially higher levels of capital expenditure), the ERA's analysis assumes that the same growth in gas volumes will be delivered from a substantially lower capital expenditure program.

It follows that the capital expenditure program underpinning the ERA's analysis of average prices in Figure 5 must imply either:

- a lower number of new connections, ie, fewer customers; and/or
- that connections will be done at a reduced cost.

The ERA contends that LRMC will not decline in the future,³⁴ and it follows that the ERA's pricing model implicitly assumes that ATCO connects fewer customers as compared with my earlier analysis.

To evaluate the level of consistency within the ERA's analysis I have examined the average volume per customer in tariff class B1, B2 and B3 from 2020 to 2080 using the customer numbers in the ERA's draft decision, ie, the customer numbers for those tariff classes to which the expenditure forecast in the ERA's pricing model relates. In particular, I:

- use the July 2014 to 2019 customer numbers in the draft decision; and
- from 2020 onwards, assume growth in customer numbers to be consistent with the ERA's capital expenditure growth assumption.³⁵

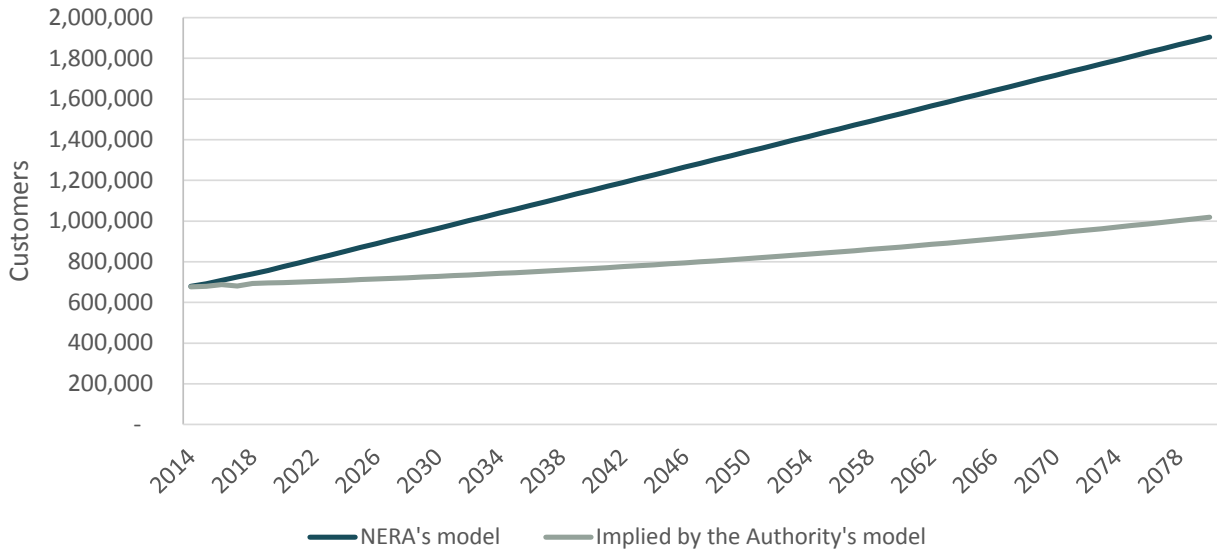
Figure 6 below illustrates that, in 2080, my earlier analysis assumes that ATCO will have 1.9 million B1, B2 and B3 customers whereas, in contrast, the ERA's capital expenditure programme implicitly assumes just 1.02 million B1, B2 and B3 customers.

³³ 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, page 1022.

³⁴ 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 1023 to 1029.

³⁵ That is, in 2019 (the last year of the regulatory period) the Authority assumes that \$46.4 million (real, \$2014) in capital expenditure will allow 2,051 new B1, B2 and B3 customers to be connected. Consequently, a \$47.8 million (real, \$2014) capital expenditure program in 2020 would allow ATCO to connect an additional 2,579 new B1, B2 and B3 customers.

Figure 6 Number of customers in Tariff classes B1, B2 and B3 implied by the ERA's model and assumed in NERA's model



However, the ERA's pricing model derives average prices using gas volumes driven by the new customer assumptions used in my earlier analysis, which relate to materially higher levels of capital expenditure. It follows that the only way a lower number of customers can consume the same volume of gas is for the average volume per customer to increase.

Figure 7 below illustrates that the ERA's pricing model implicitly assumes average consumption per B1, B2 and B3 customer increases from 19.7 GJ/year in 2012/13 to 33.1 GJ/year in 2080. In contrast, my earlier analysis assumes that average consumption per B1, B2 and B3 connection point falls to 16.5 GJ/year in 2080.

Figure 7 Volume per customer in tariff classes B1, B2 and B3 implied by the ERA's model and assumed in NERA's model

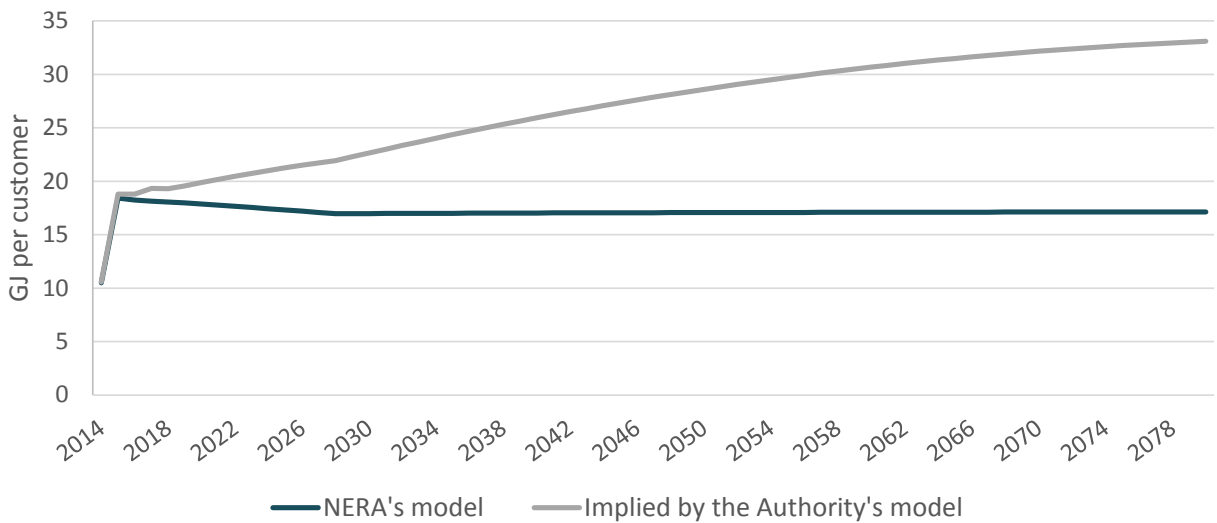


Figure 7 illustrates that the ERA's pricing model assumes consumption per customer in tariff classes B1, B2 and B3 will increase materially in the future. Such a conclusion is:

- not supported by other elements of the ERA's draft decision; and
- inconsistent with my understanding that volume per customer is expected to decrease in the future.

For these reasons, I conclude that the ERA's modelled analysis of future revenue per customer is internally inconsistent, and in need of revision such that the volume forecast used to derive average prices is commensurate with the level of capital expenditure used to derive the annual revenue requirement in each year, ie, the capital expenditure program in the draft decision and used by the ERA in its pricing model.

Further, my assessment of the ERA's modelled analysis also revealed that it had overlooked the need to revise its estimate of tax depreciation to account for the lower level of capital expenditure in its draft decision, and used to derive average prices in its pricing model. The consequence of this error is that the ERA's pricing model underprovides for the cost of corporate income tax and so its estimates of average prices are artificially low.

5.2.3 Correcting the ERA's analysis

In light of the internal inconsistencies I identify above, I have revised the ERA's analysis to incorporate a volume forecast that is commensurate with the customer numbers to which the expenditure forecasts in its draft decision and pricing model relate.

It is useful at this point to note that the ERA's pricing model assumed:

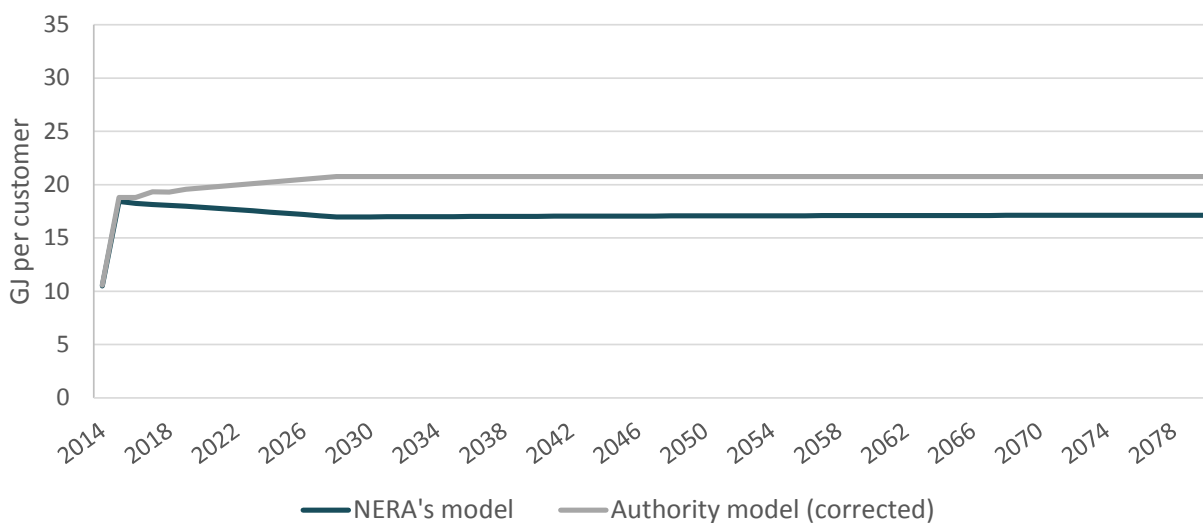
- no growth in customers in tariff class A1 from 2014 to 2080;
- no growth in customers in tariff class A2 from 2014 to 2030; and
- one new customer in tariff class A2 from 2030 onwards.

Given that the capex growth assumption used by the ERA was only applied to customers in tariff classes B1, B2 and B3, from 2014 to 2080 I revise the customer numbers and so volumes for these tariff classes only. In particular, I calculate volume for customers in tariff classes B1, B2 and B3 by:

- using the 2015 to 2019 B1, B2 and B3 customer numbers in the draft decision; and
- increasing the number of new B1, B2 and B3 customers in 2020 onwards, in accordance with the ERA's assumed rate of growth in capital expenditure.

I find that deriving a volume forecast in this way gives rise to an internally consistent, and more realistic, level of consumption per customer over the 2020 to 2080 period. Figure 8 below illustrates that, correcting the volume forecast in the ERA's pricing model results in average consumption per customer in tariff classes B1, B2 and B3 remaining constant at approximately 20 GJ/year from 2020 to 2080, which is slightly higher than that assumed in my earlier modelled analysis.

Figure 8 Volume per customer in tariff classes B1, B2 and B3 NERA's model and the ERA's corrected model



It follows that the unreasonably high volume forecasts used by the ERA to calculate average prices will result in artificially low average prices. I therefore derived revised average prices using the ERA's pricing model in combination with a revised volume forecast. Further, I have incorporated a revised estimate of tax depreciation provided by ATCO, ie, tax depreciation estimates that account for the lower levels of capital expenditure in the draft decision and used in the ERA's pricing model.

5.3 Compliance with rule 89(1)(a)

Having established best estimates of both LRMC and average prices, in this section I provide my opinion on:

'...whether the adoption of an indexed asset base or an unindexed asset base – along with the corresponding adjustment needed to offset the inflationary gain – meets the requirements of Rule 89(1)(a)'

Consistent with the requirements of rule 89(1)(a), the method used to determine the depreciation schedule in each year should be designed:³⁶

'... so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services.'

I note in section 4.1 that the ERA accepts that the depreciation schedule that best promotes efficient growth in the market for reference services, as required by rule 89(1)(a), will be that which minimises the extent to which average prices depart from the LRMC of providing reference services.

Indeed, the ERA devotes significant analysis to applying this principle³⁷ when drawing its conclusion as to which approach to setting the depreciation schedule meets the requirements of rule 89(1)(a). In light of its analysis, the ERA concludes that an unindexed capital base with straight line depreciation will:³⁸

'... not promote efficient growth in the market for reference services as the ERA is of the view that ... prices under the HCA approach [an unindexed capital base with straight line depreciation] are

³⁶ The rules, rule 89(1)(a).

³⁷ 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, paragraphs 1003 to 1038.

³⁸ 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 1038.

likely to diverge to a greater extent from LRMC than under the CCA approach [an indexed capital base with indexed straight line depreciation].'

Consistent with this interpretation of the rule 89(1)(a) criterion, evaluating compliance with rule 89(1)(a) necessitates a long run comparison of:

- the anticipated LRMC of providing reference services; and
- the level of average prices under different depreciation schedules.

In Figure 9 I show my revised estimate of average prices in the ERA's pricing model under an indexed capital base with straight line depreciation, and the same revised estimate under an unindexed asset base with straight line depreciation.

Figure 9 Revenue per GJ in the ERA's corrected model, constant prices

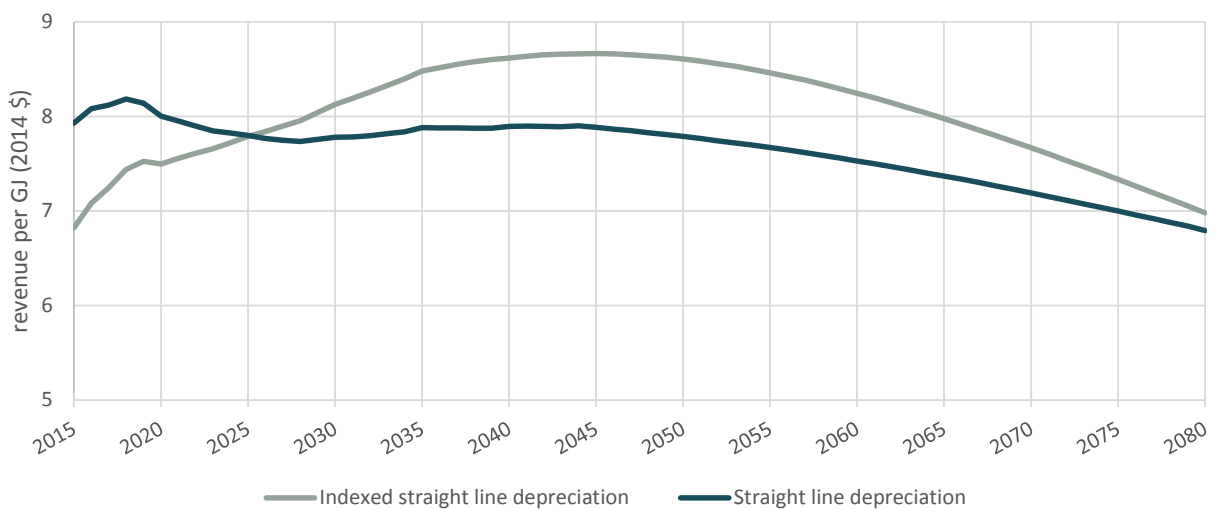


Figure 10 below illustrates the extent to which average prices depart from LRMC over the period from 2014 to 2080, against the highly conservative assumption that LRMC will be stable over that period, ie, that there will be no future improvement in productivity.

It is again helpful to note that it is the extent of departure, ie, the gap between LRMC and average prices throughout the period being compared, that is relevant to the assessment as to which depreciation schedule gives rise to a tariff profile that best promotes efficient growth in the market for reference services.



Figure 10 Change in unit price per GJ and indicative LRMC trend, constant prices

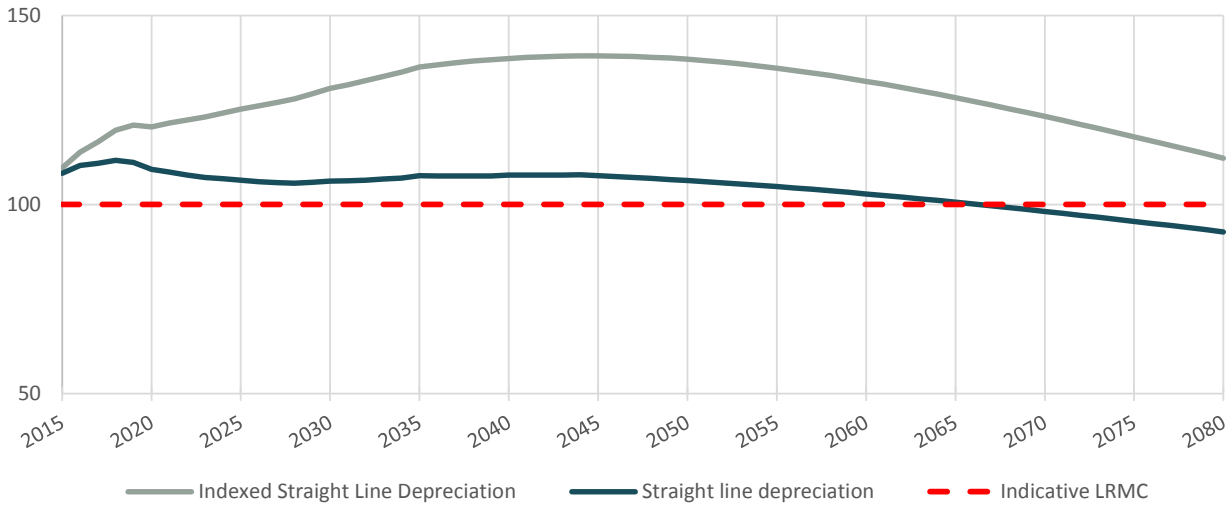
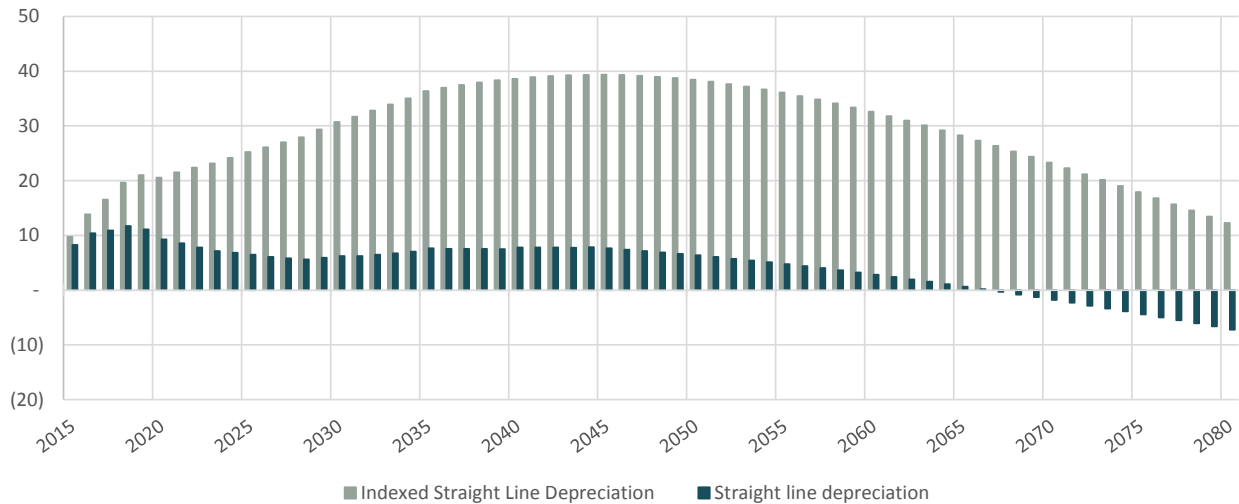


Figure 10 shows that, over the period that reflects the life of ATCO Gas' assets, the departure from LRMC is minimised when an unindexed asset base with straight line depreciation is applied from 2014 to 2080, as compared with an indexed capital base with indexed straight line depreciation.

To illustrate these relationships more clearly, Figure 11 below shows the gap between the change in these two unit price scenarios and the indicated LRMC trend from 2015 to 2080, all drawn from Figure 10 above.

Figure 11 Difference between the change in unit price per GJ and the indicative LRMC trend, constant prices



Drawing on my analysis of the likely time profile of LRMC (albeit, adopting the conservative assumption that the ERA's flat future profile should apply), and the revised average prices calculated using the ERA's pricing model, I conclude that:

- adopting an unindexed capital base with straight line depreciation meets the requirements of rule 89(1)(a); and

- applying an indexed capital base with indexed straight line depreciation does not meet the requirements of rule 89(1)(a).

5.4 ATCO's transition approach

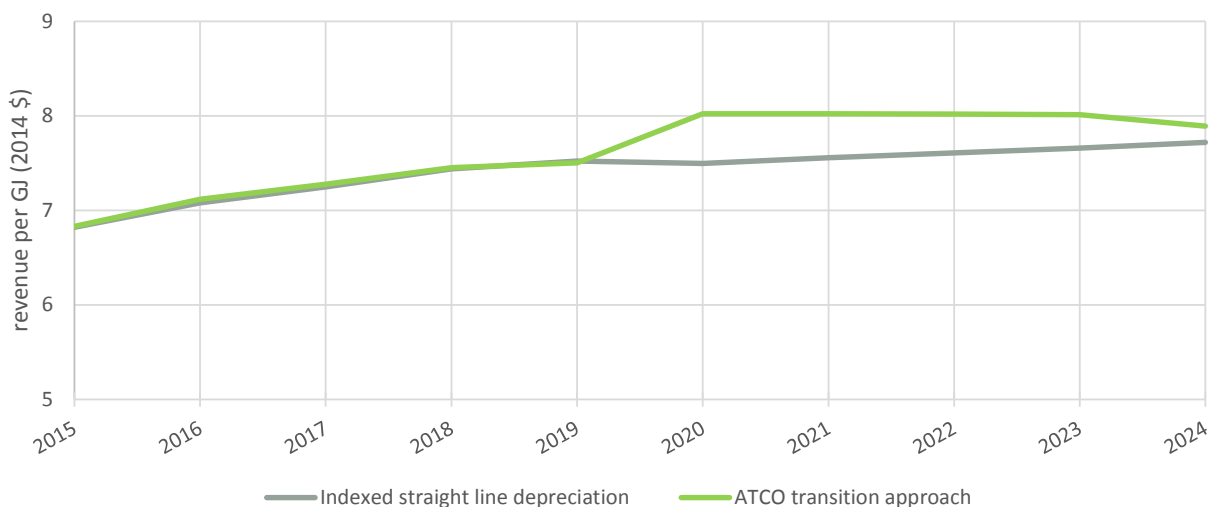
Notwithstanding that the adoption of an unindexed capital base with straight line depreciation meets the requirements of rule 89(1)(a), in this section I provide my opinion as to:

‘...whether the transition approach to an unindexed asset base – along with the correspondent adjustment needed to offset the transitional inflationary gain – as proposed by ATCO better meets the requirements of Rule 89(1)(a), as compared with the indexed asset base proposed by the ERA.’

I understand that the principal rationale for ATCO's proposed transition approach is to commence now the process of moving to an unindexed asset base with straight line depreciation, while minimising the extent of any 'price shocks' (assessed in revenue per GJ terms) throughout the transition period covering the AA4 and AA5 access arrangements.

Figure 12 illustrates that average prices (expressed as revenue per GJ) under ATCO's transition approach and under an indexed asset base with indexed straight line depreciation approach, both give rise to broadly similar prices for the period from 2014 to 2024 – as is the intention of ATCO's proposed transition.

Figure 12 Revenue per GJ in the ERA's corrected model, constant prices



Indeed, Figure 12 shows that both approaches result in substantially the same prices from 2015 to 2020. It also shows that, although there is some limited divergence from 2020 to 2025, average prices converge to very similar levels in 2024, ie, by the end of the transition and the AA5 regulatory period. In other words, the transition approach and indexed straight line depreciation give rise to similar prices from 2015 to 2025, and so, to the extent relevant, the transition approach alleviates the effect of any short term price shocks associated with adopting straight line depreciation.

Figure 13 below illustrates the extent to which average prices depart from LRMC from the end of this transition period, again by reference to the highly conservative assumption that LRMC will be stable or flat from 2014 to 2080, ie, there will be no improvement in productivity over this period.

Figure 13 Change in unit price per GJ and indicative LRMC trend, constant prices

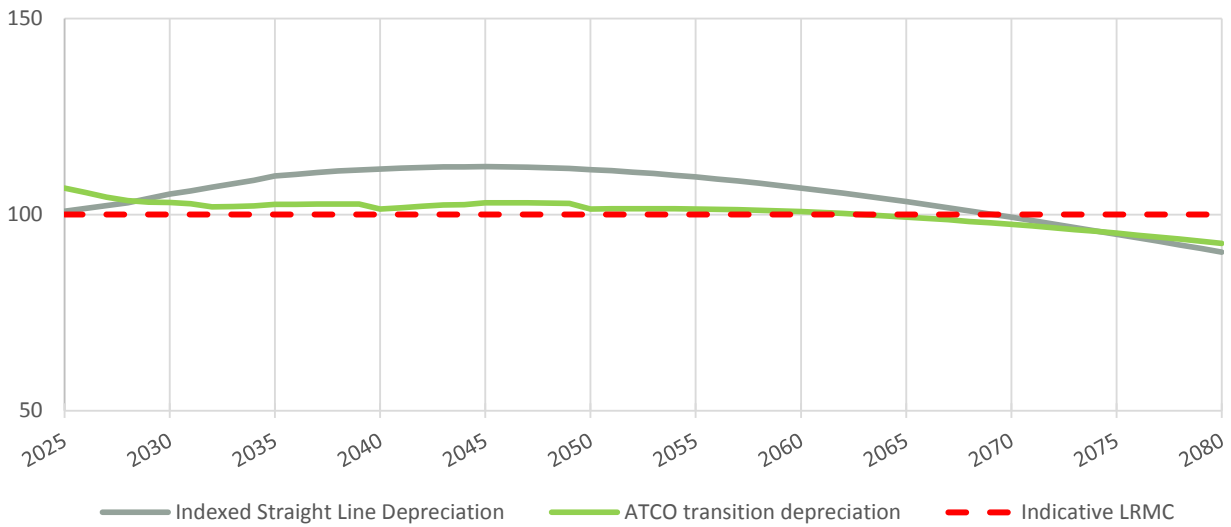


Figure 13 shows that, over the period that reflects the life of ATCO Gas' assets, the departure from LRMC is minimised under ATCO's transition approach, as compared with an approach adopting an indexed capital base and indexed straight line depreciation.

In order to illustrate this finding more clearly, Figure 14 shows the gap between the change in unit price and indicative LRMC trend from 2024 to 2080, as drawn from Figure 13 above.

Figure 14 Difference between the change in unit price per GJ and the indicative LRMC trend, constant prices



It follows that the merit of ATCO's transition approach is it alleviates any price shocks throughout the transition to an unindexed capital base, while still providing for the efficiency benefits associated with an unindexed capital base to be realised throughout the remainder of the period I analyse, ie, 2025 to 2080.

Drawing on the analysis I present above, I conclude that, after accounting for any price shocks during the transition, the adoption of an unindexed capital base with straight line depreciation better meets the requirements of rule 89(1)(a), as compared with an indexed capital base with indexed straight line depreciation, as proposed to be adopted by the ERA.

5.5 Other considerations

Finally, I noted in section 4.3 that the ERA's draft decision identifies two other considerations that, it contends, cause either the unindexed asset base or the transition to an unindexed asset base proposed by ATCO not to promote rule 89(1) criterion of efficient growth in the market for reference services. These are that not to adopt the indexed asset base approach would lead to:³⁹

- an unnecessary price shock in the near term, thereby unnecessarily discouraging demand and leading to potential inefficient investment; and
- inefficient use of upstream and downstream assets as they near the end of their lives, and so potential distortions to the incentives for investment, both by the pipeline owner and by users during that time.

First, it is important to emphasise that these comments are predicated on the ERA's own modelled analysis of the long term relationship between prices (as measured by revenue per GJ) and LRMC. My review of the price or 'revenue per GJ' component of that analysis – which I discuss in section 5.2 – reveals that it involves significant errors. Once corrected, my analysis shows that the ATCO transition approach involves no near term price shock. On that basis, this concern has no apparent foundation.

More generally, the concerns expressed by the ERA in relation to the potential for inefficient investment arising from long term distortions caused by 'inefficiently low prices'⁴⁰ as particular assets come to be replaced have no foundation, either in principle or in fact.

By its nature, the criterion established by rule 89(1)(a) addresses the objective of long term investment efficiency – both in pipeline assets and by upstream and downstream users. In other words, the most appropriate long term incentives for both pipeline owners and users will be created when the gap between best estimates of long term prices and long term LRMC is minimised. Once this essential test is met, there is no basis on which to conclude that a depreciation methodology that differs from that which meets the requirements of rule 89(1)(a) will give rise to superior long term investment outcomes.

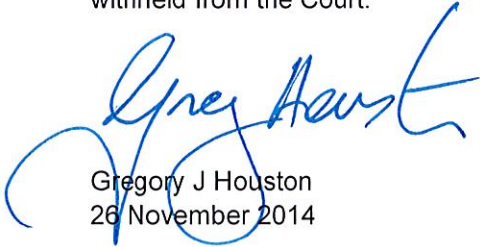
Even if this principle were to be set aside, once the corrections that are necessary to the ERA's long term price projections have been made, there is no basis on which to conclude that future prices risk becoming 'inefficiently low'. Rather, the combination of the corrected long term price projections and the intrinsic, efficiency enhancing property of rule 89(1)(a) mean that the wider considerations raised in the ERA's draft decision in fact lend further support to the conclusions I draw in sections 5.3 and 5.4, above.

³⁹ 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 1038.

⁴⁰ 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 1035.

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.



Gregory J Houston
26 November 2014

A1. 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: 66276893.1.1

26 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

We act for ATCO Gas Australia Pty Ltd (**ATCO Gas**) in relation to the Economic Regulation Authority's (**ERA**) review of the Gas Access Arrangement for ATCO Gas under the National Gas Law and Rules for the period July 2014 to December 2019. As you are aware, ATCO Gas submitted to the ERA with its Access Arrangement Proposal a report authored by you and titled: "*Depreciation Options for ATCO Gas: Expert report of Gregory Houston*" dated 13 March 2014.

On 14 October 2014, the ERA published its Draft Decision in relation to ATCO Gas' Access Arrangement Proposal. ATCO Gas wishes to engage you to prepare an expert report in connection with the ERA's Draft Decision.

This letter sets out the matters which ATCO Gas wishes you to address in your report and the requirements with which the report must comply.

Terms of Reference

Legal Framework

The terms and conditions upon which ATCO Gas provides access to its gas network are subject to five yearly reviews by the ERA. The ERA undertakes that review by considering the terms and conditions proposed against criteria set out in the *National Gas Law* and *National Gas Rules*.

Rule 76 of the *National Gas Rules* provides that the total revenue for each regulatory year is determined using a building block approach, which building blocks include a return on the projected capital base and depreciation on the projected capital base.

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Rule 87 provides for the determination of a rate of return on the projected capital base. The amended Rule 87 now in force requires a rate of return to be determined on a *nominal* vanilla basis. Importantly, ATCO Gas' rate of return in its previous access arrangement was calculated on a real basis.

Rule 88 provides for the establishment of a depreciation schedule for the purposes of determining the depreciation allowance and reference tariffs. Rule 89(1) provides that a depreciation schedule should be designed:

“(a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services...”

Rule 89(2) says that compliance with Rule 89(1)(a) may involve deferral of a substantial proportion of the depreciation, particularly in the circumstances set out in sub-paragraphs 89(2)(a) to (c).

Rule 89 is a limited discretion rule, such that if ATCO Gas' depreciation schedule proposal complies with that Rule, the ERA cannot withhold approval (Rule 40(2)).

An overarching requirement is that the ERA must, in performing or exercising its economic regulatory function or power, perform or exercise that function or power in a manner that will or is likely to contribute to the achievement of the national gas objective (NGO).

The NGO 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.

Depreciation Method

As you are aware, in its Access Arrangement Proposal, ATCO Gas proposed the use of the Historic Cost Accounting (HCA) approach to depreciation on a transitional basis.

In the Draft Decision the ERA rejected this approach on the basis it does not agree that the proposed HCA transition approach is consistent with Rule 89(1)(a).¹ The ERA rejected the analysis of the long run marginal cost (LRMC) for ATCO Gas set out in your March report and has undertaken its own analysis. The ERA concluded that its analysis shows the LRMC is likely to be flat, or at most slightly declining, over time and that the Current Cost Accounting (CCA) approach could provide a superior approach in terms of signalling efficient use over time as compared to the HCA approach.²

Total Revenue

You will also see from the Draft Decision in the Total Revenue chapter, there is a requirement on ATCO Gas to amend its proposed revised access arrangement values for Total Revenue to reflect the building blocks set out in Table 4.³ One of the inclusions in the table is an amount relating to an “Inflationary Gain” in calculating the return on the projected capital base and a return on working capital.

The ERA's removal of the inflationary gain from the building blocks arises as a result of applying a nominal rate of return to an inflated asset base. The ERA states that the inflationary gain is as a result of Rule 87(4), as it requires the application of a nominal rate of

¹ See paragraph 1003 onwards.

² See paragraphs 1017 to 1029.

³ Page 20.

return.⁴ It also says that the inflationary gain relates to the return on assets rather than nominal depreciation.⁵

Opinion

In this context ATCO Gas wishes to engage you to prepare an expert report which addresses the following:

- 1 considers the ERA's inclusion of two "Inflationary Gain" components – being the Return on Projected Capital Base and Return on Working Capital – to be deducted from the total revenue building blocks, as presented at Table 4 of its Draft Decision and the ERA's reasoning for the inclusion of such a building block, and provides your opinion on whether that approach complies with the Rules;
- 2 responds to the ERA's reasons for finding that the analysis set out in your March 2014 report in respect of the long term projections of LRMC is "flawed";
- 3 responds to the ERA's analysis of the likely LRMC for ATCO Gas, as set out in paragraphs 1017 to 1029 of its Draft Decision; and
- 4 having regard to the above, provides your opinion on whether:
 - (a) the adoption of an indexed asset base or an unindexed asset base – along with the corresponding adjustment needed to offset the inflationary gain – meets the requirements of Rule 89(1)(a); and
 - (b) the transitional approach to an unindexed asset base – along with the corresponding adjustment needed to offset the transitional inflationary gain – as proposed by ATCO Gas, better meets the requirements of Rule 89(1)(a), as compared with an indexed asset base approach.

Use of Report

It is intended that your report will be submitted by ATCO Gas to the ERA with its Access Arrangement Proposal. 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 *National Gas Law* and *National Gas 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.

⁴ Paragraph 540.

⁵ Paragraph 54.

Timeframe

ATCO Gas's response to the Draft Decision must be submitted by **27 November 2014**. Your report will need to be finalised by **26 November 2014**.

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.

In particular, your report should contain a statement at the beginning of the report 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

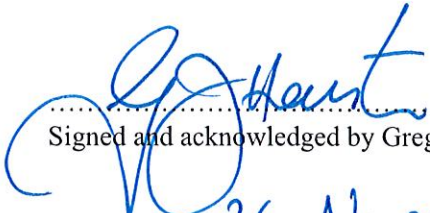
Your contract for the provision of the report will be directly with ATCO Gas. You should forward ATCO Gas any terms you propose govern that contract as well as your fee proposal.

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 26 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

A2. Annexure B – Curriculum Vitae



Greg Houston

Partner

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Web: HoustonKemp.com



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.

- 2002** **Corrs Chambers Westgarth/Ofgar**
Economic interpretation of the gas code
 Provision of expert report and sworn testimony in the matter of Epic Energy v Office of the Independent Gas Access Regulator, before the Supreme Court of Western Australia, on the economic interpretation of certain phrases in the natural gas pipelines access code.

Competition and Mergers

- 2012-13** **Minter Ellison/Confidential Client**
Merger clearance
 Expert reports submitted to the ACCC in the context of a confidential application for clearance of a proposed acquisition in the industrial gases industry.
- 2011-12** **Gilbert + Tobin/Pact Group**
Merger clearance
 Expert reports submitted to the ACCC on the competitive implications of the proposed acquisition of plastic packaging manufacturer Viscount Plastics by Pact Group.
- 2010-12** **Mallesons/APA**
Merger clearance
 Expert reports submitted to the ACCC on the competitive implications of the proposed acquisition of the gas pipeline assets of Hastings Diversified Utilities Fund by APA Group.
- 2010-11** **Johnson Winter & Slattery/ATC and ARB**
Competitive effects of agreement
 Expert reports and testimony in Federal Court proceedings concerning the competitive effects of restrictions on the use of artificial breeding techniques in the breeding of thoroughbred horses for racing.
- 2010-11** **Victorian Government Solicitor/State of Victoria**
Competitive effects of agreement
 Expert report prepared for the State of Victoria on the effects of certain restrictions applying to the trading of water rights on inter-state trade in the context of a constitutional challenge brought against the state of Victoria by the state of South Australia.
- 2009-11** **Arnold + Porter/Visa Inc, Mastercard Inc and others**
Payment card markets
 Expert reports and deposition testimony on behalf of defendants in the United States Re Payment Card Interchange Fee and Merchant Discount Antitrust Litigation, on the effects of regulatory interventions in the Australian payment cards sector.
- 2010** **Australian Competition and Consumer Commission**
NBN Points of Interconnection
 Report and advice on the competition implications in the markets for both telecommunications backhaul and retail broadband services of different choices as to the number of 'points of interconnection' in the proposed architecture of the national broadband network.
- 2010** **JWS, Gilbert & Tobin/Jetset Travelworld, Stella Travel Services**
Merger clearance
 Advice on the competitive implications of the merger between Jetset Travelworld and Stella Travel Services.

- 2009-10** **Australian Government Solicitor/ACCC**
Misuse of market power
Expert report and testimony in the context of Federal Court proceedings brought by the ACCC against Cement Australia in relation to conduct alleged to have breached sections 45, 46 and 47 of the Trade Practices Act.
- 2008-10** **Gilbert & Tobin/Confidential**
Merger assessment
Advice on the competitive implications of the then proposed merger and then subsequently the proposed iron ore production joint venture between BHP Billiton and Rio Tinto.
- 2008-10** **Allens Arthur Robinson/Amtor**
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

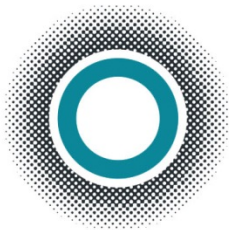
- Expert report and evidence to Victorian Appeal Panel, in the matter of the appeal by United Energy Distribution of the Electricity Price Determination of the Essential Services Commission**
Expert report, sworn evidence, 10 February 2006
- 2005**
- Expert evidence on behalf of Orion NZ, at the Commerce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



HOUSTONKEMP

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