



Submission to the WA Economic Regulation Authority

Review of Rate of Return Methodologies and Practices

Response to Final Report

February 2004

National Office

Level 3, 40 Blackall Street, Barton ACT 2600
Telephone: +61 2 6272 1555 Facsimile: +61 2 6272 1566
Email: info@ena.asn.au Website: www.ena.asn.au

Overview

On 31 December 2003 the WA Office of Gas Access Regulation released the *Final Report - Review of Rate of Return Methodologies and Practices* (Report) commissioned by OffGAR from the Institute for Research into International Competitiveness (IRIC).

The Energy Networks Association (ENA) considers that the Report is deficient and does not provide an appropriate basis on which to make a balanced assessment in relation to rate of return issues. In particular:

- the report does not take into account key developments in access pricing regulation, including critically important judicial precedents on the application of access pricing under the National Gas Code and the findings of bodies such as the Productivity Commission on how regulation has been applied
- the conclusions of the report on international comparisons of rates of return are based on simplistic analysis and inadequate evidence
- the report does not offer a rigorous analysis of some of the core limitations of the Capital Asset Pricing Model (CAPM) and relies heavily on inadequate evidence to support the existing application of the model by regulatory authorities

While the ENA welcomes the examination by the Economic Regulation Authority (ERA) of such a critical issue and supports any attempt to establish a public position on cost of capital matters, it believes the IRIC Report as it currently stands will not establish a proper foundation for future regulatory decisions.

By focusing largely on the individual component parameters of cost of capital to the exclusion of arguably the most significant developments in regulatory theory since the Hilmer Report, the IRIC Report does not succeed in the stated aim of the paper to examine evolving best practice in utility regulation based on theoretical literature and regulatory practice. The ENA believes a thorough reassessment of the Report based on full consideration of the regulatory developments outlined in this submission is warranted.

The ENA's concerns with the potential for the IRIC Report to be inappropriately relied upon in future access pricing reviews is reinforced by the inadequate consultation phase offered to interested parties in responding to issues raised in the Report. The release of the report on 31 December 2003, with an invitation to comment on the report by 30 January 2004 creates the strong perception that there is a lack of commitment to full and informed stakeholder feedback.

Background

This submission responds to the *Review of Rate of Return Methodologies and Practices – Final Report* commissioned by the WA Office of Gas Access Regulation from the Institute for Research in International Competitiveness.

The Energy Networks Association is the newly-established national representative body for gas and electricity distribution networks. Energy network businesses deliver electricity and gas to over 12 million customer connections across Australia through approximately 800 000 kilometres of electricity lines and 75 000 kilometres of gas distribution pipelines. These distribution networks are valued at more than \$28 billion, and each year these businesses undertake capital investment of more than \$2 billion in network reinforcement, expansions and greenfield extensions. The Energy Networks Association incorporates the previous representational functions of the Australian Gas Association.

Key developments in access regulation

The Report does not consider a range of recent key developments in access pricing regulation which have critical implications for the issues addressed by IRIC. These developments have arisen primarily in relation to the gas access regime (including the National Gas Code) under which the Economic Regulation Authority will make future regulatory decisions. The absence of consideration of these issues seriously limits the practical value of the Report.

Key developments which the Report does not consider include:

- draft findings of the Productivity Commission *Review of the Gas Access Regime* released while the commissioned report was being held by OffGAR and the Commission's earlier landmark *Review of National Access Regime*
- the August 2002 ruling of the Supreme Court in the matter of *Re: Dr Ken Michael AM; Ex parte Epic Energy (WA) Nominees Pty Ltd & Anor¹* - despite its direct relevance to the issues being considered, including issues of the appropriate standard of competition which should inform access pricing regulation
- recent further precedents under the National Gas Code regarding the appropriate application of the pricing provisions of the Code – including *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT 6 and *Application by Epic Energy South Australia Pty Ltd* [2003] ACompT 5 - both released while the IRIC Report was being held by OffGAR.

Each of these three developments has important implications for approaches to access pricing issues under the National Gas Code and the National Electricity Code, and individual network tariff rulings.

While both the judgements of the Australian Competition Tribunal in the GasNet and Epic Energy Moomba-Adelaide Pipeline matters were unavailable at the time of the completion of the Report, judgements were scheduled for December 2003. Similarly, the release of the Productivity Commission Draft Report of the *Review of the Gas Access Regime* was publicly scheduled for mid-December.

¹ [2002] WASCA 231 [55]

The timeline adopted by OffGAR in seeking to finalise the Report thus appears to have resulted in a document significantly outdated by key events at its time of eventual release. In particular, the absence of any credible discussion of the implications of the Epic Energy appeal judgement of August 2002, which directly involved OffGAR, would seem to be a serious practical deficiency in the Report that significantly undermines the comprehensiveness and credibility of its analysis of access pricing issues.

Productivity Commission Draft Report *Review of the Gas Access Regime*

The Productivity Commission has made a series of draft findings in its comprehensive *Review of the Gas Access Regime* that are directly inconsistent with findings in the Report.

The Productivity Commission *Review of the Gas Access Regime* is the most comprehensive review of the existing regulatory regime and access pricing under the regime since its introduction in 1997. The review was commenced in June 2003 and has analysed contributions from over 50 individual parties with diverse views and first-hand experiences regarding the operation of the regime.

In its Draft Report issued in December 2003 the Commission made a series of findings and recommendation regarding the operation of access pricing under the gas access regime. The Draft Report includes:

- findings and recommendations that are directly inconsistent with those of the IRIC Report
- analysis of issues not considered by the IRIC Report and more detailed and comprehensive analysis of issues inadequately addressed in the IRIC Report.

These are considered in detail below.

Findings and recommendations inconsistent with the IRIC Report

The Productivity Commission has made a series of draft findings and recommendation across a range of issues mentioned in the IRIC Report, including:

- the costliness and sustainability of the existing approach to access pricing
- the degree of imprecision and discretion involved in the existing approach to access pricing
- the impact and likely efficacy of the *ACCC Draft Greenfields Guideline for Natural Gas Transmission Pipelines*

In relation to the cost of existing approaches to access pricing regulation the Productivity Commission made the finding that:

The current regulatory approach of having access arrangements with reference tariffs is costly, especially in relation to the market impact. Therefore, while some refinements to the existing regulatory approach are needed, there is a sound basis for an alternative less costly approach.²

In contrast, the IRIC concludes that the underlying Capital Asset Pricing Model used in current access pricing regulation of gas networks and pipeline remains appropriate and that its possible continued use is explicable because:

...despite its shortcomings, it has the least onerous information requirements and is, of the methods available, the least subject to judgement.³

The ENA notes that this conclusion is affected by the extremely narrow range of alternatives to the CAPM model examined by the Report. Most industry participants with practical experience with access pricing regulation, however, would agree that aspects of the Capital Asset Pricing Model have conferred extremely wide discretion on regulatory bodies. The Productivity Commission has also made findings that existing approaches to the application of the CAPM have actually fostered increasingly onerous information requirements.⁴ The Productivity has also examined CAPM approaches and made the finding that:

Draft Finding 7.2

There is disagreement among technical experts about how regulatory rates of return (WACC) in Australia compare to those in other countries. This illustrates the inevitable imprecision and subjectivity that occurs when regulators are required to approve reference tariffs.

Another example of a policy discussion where the comprehensive review undertaken by the Productivity Commission appears to cast significant doubt on findings of the IRIC Report is in the area of greenfields investment. The IRIC Report bases its conclusions on the impact of regulation on greenfields investments almost exclusively on propositions advanced in the ACCC *Draft Greenfields Guideline for Natural Gas Transmission Pipelines*, issued in June 2002.⁵ The Report demonstrates a lack of familiarity with investor responses to the guideline, and its conclusions that approaches suggested by the ACCC in the guideline represent the best policy response to greenfields issues are again not supported by the draft findings of the *Review of the Gas Access Regime*:

Draft Finding 9.1

The Australian Competition and Consumer Commission's draft greenfields guideline does not substantially alter the potential for the Gas Access Regime to discourage investment. This is because the published guideline:

- is only a draft (and has been so for at least 18 months)*
- maintains the wide discretion that the Gas Code gives to regulators to set key regulatory parameters.⁶*

² Draft Finding 7.6, Productivity Commission *Review of the Gas Access Regime – Draft Report*, December 2003, p.xliii

³ Institute for Research into International Competitiveness, *Review of Rate of Return Methodologies and Practices*, September 2003, p.14

⁴ Draft Finding 7.3 and Draft Finding 7.5, Productivity Commission (2003), p.xliii

⁵ See IRIC (2003), Section 6.1.6, p.57-59

⁶ Draft Finding 9.1, Productivity Commission (2003), p.xlv

The ACCC has not moved to finalise the *Draft Greenfields Guideline*, and both the Productivity Commission Draft Report, and the interim Federal Government response to the Productivity Commission's *Review of the National Access Regime* - which tasked the Commission with considering alternative greenfields mechanisms - appear to indicate that the policy discussion has advanced well beyond the limited treatment of the issue of the IRIC Report.⁷

More generally on greenfields issues, the Productivity Commission has moved to recommend binding rulings of non-coverage and raised the possibility of risk premiums being adopted to recognise asymmetric regulatory risk and the potential for truncation of returns.⁸ The IRIC Report, in contrast, is largely written without any substantial consideration of the issues of truncation of returns by access regulation and asymmetric risk. Indeed, in a short theoretical discussion apparently drawn almost entirely from the ACCC's *Draft Greenfields Guideline* the IRIC Report actually reaches a conclusion that appears to be the reverse of the emerging theoretical consensus on asymmetric risk and truncation. The Report states:

It is not clear that incentive based regulation or reference tariffs result in limits to upside returns.⁹

In fact, asymmetric regulatory risk is a special class of risk that must be recognised when setting the cost of capital¹⁰. The presence of regulatory risk requires the setting of a target return under regulation that is higher than the required return otherwise implied by the CAPM to compensate investors for the expected losses due to the presence of regulatory risk. Inadequate recognition of the nature of this risk and incentives to compensate for it will lead to sub-optimal investment outcomes where regulated businesses will only invest when there is no material downside risk.

The lack of compelling substantiation for the views set out in the IRIC Report on asymmetric risk or addressing of the weight of alternative evidence is disturbing as it appears to imply a lack of awareness of what have been major theoretical issues of direct relevance to rate of return methodologies. These issues have been extensively discussed in the Productivity Commission *Review of the National Access Regime*, the *Review of the Gas Access Regime*, the Council of Australian Governments Energy Market Review and a number of other contexts.¹¹

Analysis of issues not fully considered by the IRIC Report

In a number of areas the Report appears to have completely overlooked both significant developments with implications for the practice of access regulation, and important issues raised and discussed in key inquiries and policy making processes.

These include:

⁷ *Government Response to Productivity Commission Review of the National Access Regime* (2002), p.2

⁸ Draft Finding 9.1, Productivity Commission (2003), p.xlv and see also Draft Finding 9.6, p.xlvi

⁹ IRIC (2003), p. 57

¹⁰ Kolbe L A, Myers S C, *Regulatory Risk: Economic Principles and Applications to Natural Gas Pipelines and Other Industries*, Kluwer Academic Publishers, 1993, pp 3-9

¹¹ Draft Finding 9.6, Productivity Commission (2003), p.xlvi, cf. IRIC (2003), p.57

- the high potential costs of medium term underinvestment versus the lower potential costs of marginally overcompensating service providers
- the adverse impact of access regulation on service innovation and service offerings
- the risks of regulatory error

The high potential costs of medium term underinvestment compared to the lower costs of potentially overcompensating service providers has been a fundamental area of regulatory debate and policy over the past two years. The IRIC Report fails to refer to any aspect of this issue, despite it featuring prominently in the Productivity Commission *Review of the Gas Access Regime*, the *Review of the National Access Regime*, the Epic Energy appeal judgement, and being referenced in ongoing regulatory decisions.¹² In the 2001 *Review of the National Access Regime*, for example, the Productivity Commission concluded:

Given the asymmetry in the costs of under and overcompensation of facility owners, together with informational uncertainties facing regulators, there is a strong in principle case to 'err' on the side of investors.¹³

The Productivity Commission's inquiry found a strong case for the proposition that the economic costs of over compensating service provider will be lower than for under-compensation. This asymmetric risk issue has direct application to all access pricing outcomes under third party access regime, but has been overlooked by the IRIC.

Another area of regulatory practice and policy which is not adequately addressed in the IRIC Report is the evolving understanding of the interaction of cost-based pricing approaches and dynamic efficiency. The Productivity Commission addressed this issue throughout its *Review of the National Access Regime*, and in its *Review of the Gas Access Regime* has stated that there is evidence that the gas access regime might be having a discouraging effect on innovation and improvement in service offerings.¹⁴ Significantly, there is no substantive discussion of this issue with key implications of access pricing determinations in the IRIC Report.

Another fundamental issue in access pricing which is overlooked by the IRIC is the interaction of regulatory errors and cost of capital determinations. Regulatory error is a key concept which has been subject to extensive discussion in several policy and price review contexts in Australia over the past several years, yet is not considered by the IRIC Report. As the Productivity Commission noted in its recent *Review of the Gas Access Regime*:

¹² See Productivity Commission *Review of the National Access Regime – Draft Report*, March 2001, p.71, Productivity Commission (2003), p.108-9, *Re: Dr Ken Michael AM; Ex parte Epic Energy (WA) Nominees Pty Ltd & Anor* [2002] WASCA 231 [151], Essential Services Commission *Review of Gas Access Arrangements – Draft Decision*, p.ix

¹³ Productivity Commission (March 2001), p.71

¹⁴ Draft Finding 4.4, Productivity Commission (2003), p.xxxxvi, and see also Productivity Commission (March 2001), p.100 and p.193 and Productivity Commission *Review of the National Access Regime – Inquiry Report*, September 2001, p.70

Draft Finding 7.5

*There is a high potential for regulatory error when approving reference tariffs. The Gas Access Regime requires regulators to make decisions about future market circumstances that are uncertain. This has led regulators to use many debatable assumptions. There is a consequential tendency for regulators to seek additional information from service providers and further studies by consultants. This is unlikely to reduce uncertainty significantly.*¹⁵

The IRIC Report appears to be precisely the type of ‘further studies’ commissioned by regulatory authorities that the Commission identifies. The Commission also made extensive findings on the risk of regulatory error and its implications for access pricing in its preceding *Review of the National Access Regime*, however none of these issues are raised in the IRIC Report.¹⁶

The failure to consider a range of core regulatory issues at the forefront of the theory and application of access pricing is inconsistent with the stated aim of the Report to consider evolving ‘best practice’ drawing on theoretical literature and regulatory practice.¹⁷ The ENA contends that failure of the IRIC Report to address any of the issues identified above makes its use as input into significant regulatory decisions inappropriate.

Epic Energy appeal

In addition to omitting discussion of key regulatory policy developments, the Report also fails to fully consider the outcomes of judicial rulings on the application of access pricing under the National Gas Code, in particular *Re: Dr Ken Michael AM; Ex parte Epic Energy (WA) Nominees Pty Ltd & Anor.*

Despite the intended use of the Report as an input into access pricing decisions under the National Gas Code, the Report includes only one reference to the Epic Energy appeal. In a brief reference to the role of the regulator there is the following footnote (reproduced in full):

We make this distinction in light of the recent Supreme Court decision in regards to the Dampier to Bunbury Natural Gas Pipeline, whereby the Court decision may require the Regulator to consider economic development and other issues, due to the existence of Section 2.24 of the Code. Whilst this decision may be correct in law, it is not, in our opinion, a good foundation for economic regulation based on sound economic principles. The issue would seem to lie in Section 2.24 of the Code, which may require revision, when next the Code is reviewed.¹⁸

The potential for ERA to act in reliance on this element of the report raises significant concerns for ENA members. Regulatory authorities have an absolute obligation to apply the legal framework on the basis of provisions currently in force, and existing judicial precedents which provide guidance on matter of interpretation. As it stands, in relation to decisions under the gas access regime, the ERA has a duty to apply Section

¹⁵ Draft Finding 7.5, Productivity Commission (2003), p.xliii

¹⁶ See for example Productivity Commission (September 2001), p.90-94 and p.339

¹⁷ IRIC (2003), p.1

¹⁸ Footnote 22, IRIC (2003), p.32

2.24 of the Code, regardless of IRIC's (contested and unsubstantiated) view that the decision does not provide sound principles upon which to base economic regulation.

There is no reference in the IRIC Report to core elements of the Epic Energy judgement despite its aim of considering evolving best practice in utility regulation. This, in ENA's view, is remarkable considering:

- the critical implications of the Court's findings on 'workable competition' for economic regulation, and how regulatory authorities apply both the gas access regime and other third party access regimes
- the fact that the appeal was heard in Western Australia, and directly related to OffGAR's most recent pricing determination

The absence of any detailed analysis of the implications of 'workable competition', rather than 'perfect competition', being the goal of access pricing decisions is a fundamental omission in a paper of this kind. The absence of any substantial discussion on the impact of the Supreme Court decision in a paper prepared in Western Australia for OffGAR is either a serious flaw in the Report itself, or in the commissioning process undertaken by OffGAR. In either case, the flaw is sufficient to undermine the value of the Report as an input into any future access pricing review.

Other recent appeals outcomes and precedents

Subsequent to the finalisation of the Report there have been two significant judgements issued in merit appeals against ACCC decisions on access pricing. These judgements are *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT6 and *Application by Epic Energy South Australia Pty Ltd* [2003] ACompT5. Both of these judgements were released while the report was being held by OffGAR.

The ENA considers that these merit appeal judgements have important implications for the formation of ERA's views of cost of capital issues. The judgements also contain elements which appear to cast doubt on the approach adopted in the IRIC Report. As an example, the IRIC Report appears predicated on the assumption that it is for the regulatory authority to 'determine' a precise cost of capital for a particular network or pipeline.¹⁹

As the GasNet case makes clear, however, this is a fundamental misunderstanding of the regulator's role and the correct scope of this role may be far more limited than the central 'determinative' function implied by the IRIC Report.²⁰ The Tribunal noted in the case that:

Contrary to the submission of the ACCC, it is not the task of the Relevant Regulator under s 8.30 and s 8.31 of the Code to determine a 'return which is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the Reference Service'. The task of the ACCC is to determine whether the proposed

¹⁹ IRIC (2003), p.4

²⁰ *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT 6 [42]

AA in its treatment of Rate of Return is consistent with the provisions of s 8.30 and s 8.31 and that the rate determined falls within the range of rates commensurate with the prevailing market conditions and the relevant risk.²¹

In view of the inconsistency between the Australian Competition Tribunal's assessment of the role of regulatory authorities and the IRIC's apparent understanding, ENA considers that the Report should not be relied on in relation to the appropriate role of regulatory authorities in relation to access pricing determinations.

Another important feature of the GasNet case was the ruling that, contrary to the views of the ACCC and Associate Professor Martin Lally, the Tribunal ruled that the 10 year government bond rate is the appropriate benchmark for the risk free rate, not the 5 year government bond rate.²²

The Tribunal is satisfied that the use by GasNet of a ten year Commonwealth bond rate to determine a Rate of Return on equity under s 8.30 of the Code was a correct use of the CAPM and was in accordance with the conventional use of a ten year bond rate by economists and regulators where the life of the assets and length of the investment approximated thirty years in the MRP calculation and the risk-free rate. The use of the CAPM with these inputs in the Tribunal's view, produces a Rate of Return on equity which s 8.31 treats as one commensurate with the relevant market conditions and risk for the purposes of s 8.30.²³

The ENA considers that the Economic Regulation Authority's assessment of the IRIC Report should reflect this established precedent.

Comparisons of international rates of return

The conclusions of the Report on international comparisons on rates of return are not based on an accurate or comprehensive analysis of the relevant issues.

The analysis relies narrowly on two pieces of data which are of limited general application, in particular:

- historic rates of return from the mature gas transmission sector in the United States; and
- historic rates of return for 12 gas distribution businesses operating in Canada

Compounding the narrowness of this analysis and its questionable relevance to Australian regulatory decisions, evidence which is examined which does not support the thesis of the Report that rates of return and current approaches are appropriate is excluded from consideration. An example of this is Australian Bureau of Statistics

²¹ *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT 6 [42]

²² Lally, M, *Determining The Risk Free Rate For Regulated Companies*, paper prepared for the Australian Competition And Consumer Commission, August 2002 [online: accessed 2 Feb 2004] <<http://www.accc.gov.au/content/index.phtml/itemId/332450>>

²³ *Application by GasNet Australia (Operations) Pty Ltd* [2003] ACompT 6 [48]

data showing that the regulated energy and water sector has one of the lowest measured returns on assets of any sector in the Australian economy.²⁴

The ABS data is instructive as it allows us to ascertain the rate of return that prevails in efficient industries operating in globally competitive markets²⁵ (ie. workably competitive markets). These industries would necessarily include the mining, manufacturing, communication services and finance and insurance sectors. The table below shows that the rate of return on equity provided in regulatory decisions falls well short of that being achieved in unregulated workably competitive markets. Moreover, these industries are achieving their return on equity with a gearing ratio of approximately 60:40, which is the same as that used in Australia regulatory decisions.

Table 1 – Returns and gearing – Australian industry 1995-96 to 1999-2000

Industry class	Average nominal pre-tax return on net worth (%)	Gearing (%)
Mining	20.8	60.1
Manufacturing	16.8	57.2
Communication services	25.7	56.9
Finance and insurance	12.7	80.9
Average	19.0	63.8

Hence, IRIC's conclusion that OffGAR has allowed a return on equity of almost double the rate of return being achieved in the market is incorrect.

Thus, the Regulator has calculated access reference tariffs based on a WACC of almost twice the average actual rate of return on assets made in the market over the five year period shown.²⁶

The Australian Bureau of Statistics data would indicate that Australian regulator determined post-tax nominal rates of return on equity of around 12 per cent are approximately 200 basis points lower than that being achieved in workably competitive markets.²⁷

Outcomes of comprehensive surveys of rates of return

In September 2003 the Network Economic Consulting Group released its *International comparison of WACC decisions* and provided a copy to the Productivity Commission *Review of the Gas Access Regime*.

The NECG study is the most comprehensive comparison and analysis of Australian and international cost of capital decisions made to date. It is lengthy and detailed, and covers a number of infrastructure sectors, surveying over 100 regulatory decisions across Australia, the United States, the United Kingdom, Canada, France, Ireland, the Netherlands and New Zealand. For the purposes of assessing the IRIC Report, the

²⁴ IRIC (2003), p.44

²⁵ As Australia is a small open economy it follows that domestically domiciled industries (i) must compete with imports and (ii) will not survive unless they are efficient.

²⁶ IRIC (2003), p.44

²⁷ As a rule of thumb the post-tax return divided by (1 – tax rate) gives the approximate pre-tax return. $12\% \div (1 - 30\%) = 17.1\%$, which is approximately 200 basis points less than the 19% average being achieved in the market.

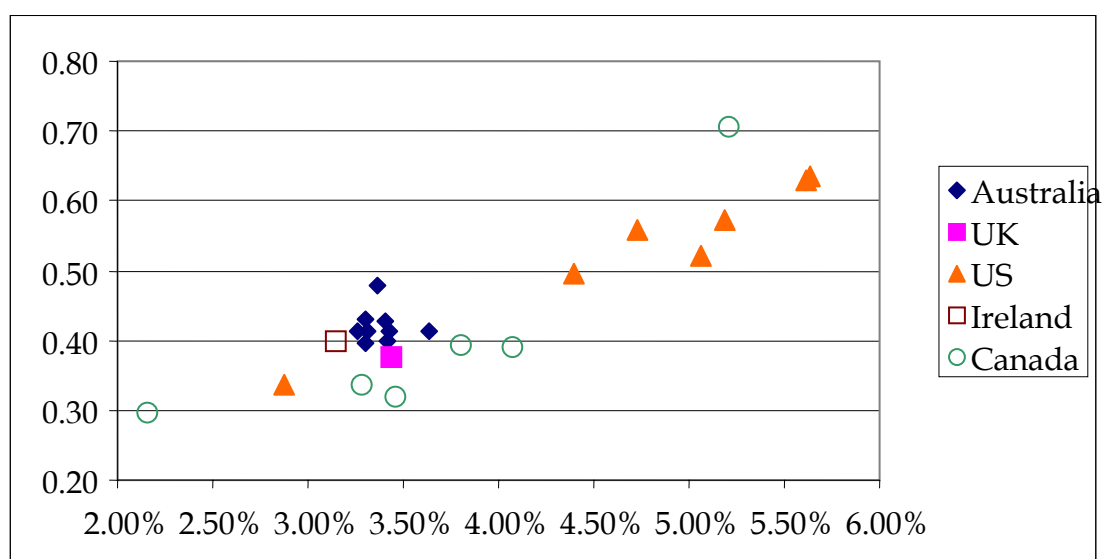
results of analysis undertaken in relation to the electricity and gas distribution sector are extremely relevant and significant.

The NECG study concluded in relation to gas distribution sector decisions:

Figures 10 and 11 show the Australian decisions in general provide (unadjusted) margins over the risk free rate that are broadly equivalent to those calculated for Canada, but significantly lower than those in the US. The Irish and UK decisions are broadly comparable to the Australian decisions when the adjustment factor is applied.²⁸

The study illustrates (See [Figure 1](#) below) that in relation to regulatory decisions in the Australian gas distribution sector on the assumed cost of capital (x-axis), and the key asset beta assumption (y-axis), there is no basis to conclude that regulatory decisions have been ‘generous’ in internationally comparative terms.

Figure 1 Gas distribution – adjusted vanilla WACC and asset beta²⁹



As NECG notes in the study, regulatory outcomes have been comparable to United Kingdom decisions, but significantly lower than cost of capital decisions made in the United States.

In the case of electricity distribution networks the results of the NECG study are even clearer:

...the Australian decisions provide significantly lower margins above the risk free rate than those in the US. The only exception is the decision by the Public Service Commission of Utah, which has a relatively low calculated vanilla WACC margin and asset beta due to the relatively high value of the 10-year bond at the time of the decision. The decision by Ofgem on the UK electricity distributors provided a higher

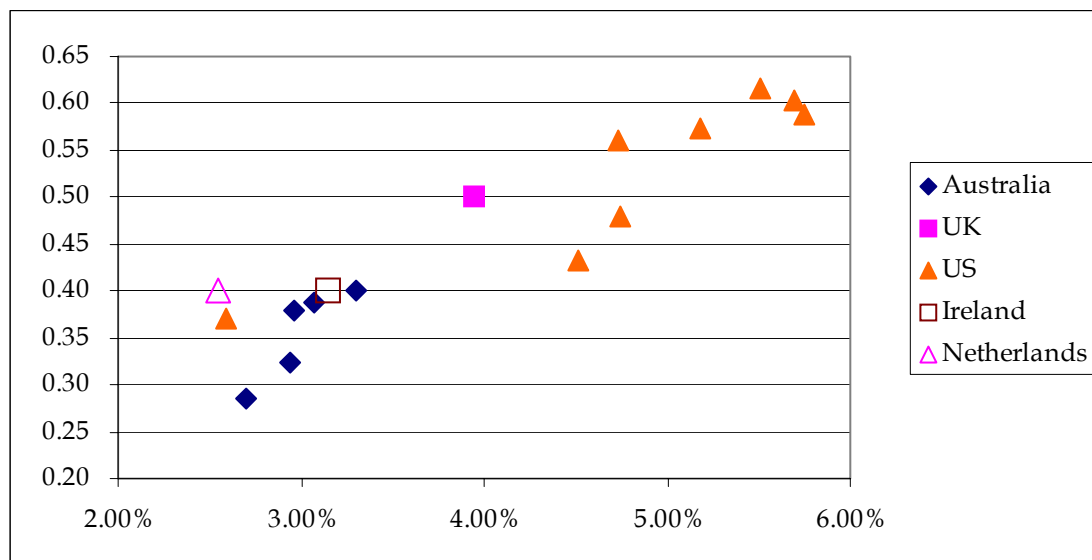
²⁸ Network Economics Consulting Group *International comparison of WACC decisions*, September 2003, p.73
<www.pc.gov.au>

²⁹ Network Economics Consulting Group *International comparison of WACC decisions*, September 2003, p.73
<www.pc.gov.au>

asset beta than all the Australian decisions, and also results in a higher adjusted vanilla WACC margin than all the Australian decisions.³⁰

This point is reinforced by Figure 2 below.

Figure 2 Electricity distribution — adjusted vanilla WACC margin and asset beta³¹



This comprehensive and widely based survey of international rates of return casts significant doubt on the narrow analysis carried out in the IRIC Report. The ENA considers that the Economic Regulation Authority could not reasonably make judgements on international rates of return based on the IRIC analysis given its overwhelming reliance on two narrow sources of limited relevance to access pricing regulation in Australia.

Lack of analysis of core limitations of CAPM

The Report fails to fully examine a range of identified deficiencies and artificial assumptions within the Capital Asset Pricing Model which have been widely discussed in academic literature and policy making contexts.³²

Attachment 1 of the Report purports to examine a range of risks that it is claimed industry participants have raised in the context of access pricing determinations to date. The Attachment examines a number of types of risk and determines whether each is systemic or non-systemic. The brief and simplistic analysis of each issue concludes that for all but a few, the risks identified can be diversified away at no cost.

³⁰ Network Economics Consulting Group *International comparison of WACC decisions*, September 2003, p.69 <www.pc.gov.au>

³¹ Network Economics Consulting Group *International comparison of WACC decisions*, September 2003, p.70 <www.pc.gov.au>

³² See for example the findings by Fama and French that standard errors of more than three per cent per year are typical for both CAPM and related models. Fama, E and French, K 'Industry costs of equity', *Journal of Financial Economics* 43 (1997) p.153-193

Another example of the simplifications inherent in the CAPM approach is its focus on static efficiency, and its poor ability to reflect the key role that dynamic efficiency plays in competitive markets. This is another issue which is inadequately recognised by the IRIC Report.

Lack of compelling support for CAPM approach

The Report recommends the continued adoption of a CAPM approach despite itself noting a lack of compelling evidence that this model is superior to a range of theoretical alternatives. The Report assesses the:

- Gordon growth model
- Multi-stage dividend growth model
- Fama-French ‘three factor’ model
- Arbitrage pricing model

In reaching an assessment of which model is the most appropriate the IRIC cites evidence that comparisons between these models have led to a lack of a firm conclusion on which is superior.³³ Importantly, the Report fails to examine a range of other alternative access pricing models which have been subject to considerable discussion and review over the past few years in Australia (including non-cost based approaches such as price monitoring).³⁴

The continued use of existing access pricing models on a ‘default’ basis may have some practical advantages in terms of offering a level of certainty and predictability to long term investors, but this factor is not raised or weighed against other relevant factors in the Report. Rather, despite the open conclusion on whether CAPM offers a superior approach to those examined (even excluding other models not examined) the Report simply asserts it is the most appropriate model for continued use.³⁵

Consistency with other decisions by regulatory authorities

The Report focuses heavily on individual parameters of the cost of capital estimate, and stresses that a degree of consistency has emerged amongst regulatory authorities regarding these individual parameters.³⁶ The Report appears at times to equate the ‘consistent’ application of some elements of the WACC model with the adoption of a theoretically appropriate approach.

There is no objective evidence that regulatory authorities adopting identical approaches to estimations of individual WACC parameters will result in these estimates being closer to either an optimal practical approach or a ‘correct’ (though mostly unobservable) theoretical value. Regulatory reliance on ‘consistency’ with other regulatory decisions where there is significant uncertainty about a cost of capital

³³ IRIC (2003), p.12

³⁴ See for example, AGA Submission to the Productivity Commission *Review of the Gas Access Regime*, September 2003, Appendix A which listed some features of alternative access pricing models <www.gas.asn.au>

³⁵ See IRIC (2003), p.50

³⁶ See IRIC (2003), p.18, p.25 and p.50

parameter or where market observation is impossible could equally serve to compound past regulatory errors.

Regulatory authorities appear to recognise this point in a range of other issues involved in access pricing and cost of capital estimation. As an example, Australian regulatory authorities adopt a range of inconsistent approaches and values on issues such as:

- the use of statutory or effective tax rates in cost of capital
- the use of 5-10 year bond rates in estimating the risk free rate
- value of imputation credits of between 0.3 - 0.5
- provision for a return on working capital
- compensation for various classes of asymmetric risk

These variations reinforce that mere consistency with previous regulatory decisions provides weak justification for the adoption of a particular approach compared to rigorous analysis of the actual issues involved.

Reliance on caveated and questionable information

Key elements of the report which support the ongoing use of the capital asset pricing model as applied by OffGAR are heavily caveated and appear to rely on evidence of questionable explanatory power.

As an example the Report, in assessing rates of returns of Australian utilities, examines the share market performance of the relatively small number of publicly listed utility firms in Australia. The report states:

Apart from a brief period in November/December (longer for Alinta), all outperformed the All Ordinaries Index in the six months from October 2002 to April 2003. (emphasis added)

Linking the out-performance against the market of a small number of listed energy companies (some with key non-regulated activities) over a six month period to general conclusions regarding the practice of cost of capital estimation is an extremely doubtful proposition, which ENA considers that no party engaged in rigorous analysis of the issues would support.

The only conclusion possible from the IRIC's statement is that the selected firms outperformed the benchmark All Ordinaries index for a period approaching three months, under performed the benchmark for an intervening period, then outperformed the benchmark for approximately three months. Importing into these variations a statistical significance (or a flow on policy conclusion) is simply not credible. Changes in the level of the benchmark All Ordinaries index and relative performance of a firm against that benchmark will be influenced by a myriad of factors aside for access pricing regulation, including interest rate expectations, international events, short-term arbitrage or speculation, or other unrelated events. The ENA has similar concerns regarding the other narrow sources of information outlined in the report,

including news articles regarding AMP projections of likely future equity returns and US data on returns on gas pipelines.³⁷

The Energy Networks Association
27 February 2004

³⁷ IRIC (2003), p.42