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Mr Peter Hallahan
Secretary
Senate Economics Legislation Committee
Suite SG.64
Parliament House
CANBERRA ACT 2600

Dear Mr Hallahan

INQUIRY INTO THE PROVISIONS OF THE TRADE PRACTICES AMENDMENT (NATIONAL ACCESS REGIME) BILL 2005

Thank you for your letter of 4 July 2005 inviting submissions to the Senate Economics Legislation Committee Inquiry into the provisions of the Trade Practices Amendment (National Access Regime) Bill 2005.

The Economic Regulation Authority (**Authority**) is generally supportive of the proposed amendments to the National Access Regime aimed at improving the regulatory regime to provide access seekers and investors with greater confidence and certainty regarding the regulatory framework. For example, the Authority supports the introduction of an objects clause, couched in terms of focusing on economic efficiency, to assist in bringing more certainty and clarity to the legislation. The Authority also supports the introduction of target time limits, to increase incentives for timely decision-making whilst recognising the need to retain flexibility for practical purposes.

However, whilst recognising the benefits that pricing principles could provide, the Authority is concerned the principles currently proposed by the Commonwealth Government may be being inappropriately influenced by apparent misunderstandings and self-interest arguments evident in the present regulatory debate. It is for this reason the Authority has undertaken to provide this submission to the Inquiry; to not only inform the Senate Committee in the context of its deliberations regarding the Bill before it, but to also contribute to and enhance the rigour applied to views presented in the current debate regarding economic regulation.

The Authority's interest in matters before the Senate Committee

By way of background, the Authority is responsible for third party access regulation and licensing regime administration functions across Western Australia's gas, electricity, rail and water industries. In addition to providing efficient and effective independent regulation and independent advice to government, the Authority's mission includes promoting economically efficient outcomes in Western Australia through advancing the debate in economic regulation.

As part of its participation in the economic regulation debate, the Authority continues to give considerable thought to issues similar to those before the Senate Committee. Though the Authority's recent investigations have predominantly focussed on issues from the perspective of the *National Third Party Access Code for Natural Gas Pipeline Systems* (**Gas Access Regime**) and equivalent electricity-related regulatory regimes, the issues regarding the purported effects of regulation on efficient investment in significant infrastructure (in terms of some stakeholders criticisms regarding consistency, regulatory risk, regulated rates of return, and timeliness of regulatory decision making processes) are tantamount to those currently under investigation with respect to the National Access Regime.

Accordingly, the Authority provides the following views for the consideration of the Senate Committee.

Proposed amendments to the National Access Regime

The Authority is generally supportive of those sections of the Bill aimed at amending the National Access Regime to be more consistent with industry-specific regulatory regimes established under the Competition Principles Agreement framework.

In particular, the Authority acknowledges the benefit of introducing an overarching objects clause, to assist in bringing more certainty and clarity to the legislation by providing clear guidance to the regulator for resolving any tension in subordinate objectives when exercising regulatory discretion. The Authority supports the objects clause being couched in terms of focusing on economic efficiency, consistent with the overarching objective of regulatory intervention being to promote – insofar as it is possible – the crucial resource allocation efficiency and overall economic welfare that would otherwise come from a competitive market environment. The Authority notes a similar objects clause is embodied within the Western Australian electricity industry regulatory regime (which the Authority is responsible for administering under the *Electricity Networks Access Code (WA) 2004*), and is currently under consideration for inclusion in the Gas Access Regime (and supported by jurisdictional regulators).

Further, the Authority is supportive of the approach adopted for introducing target (non-binding) time limits for regulatory decision-making processes. Whilst there is considerable merit in enhancing regulatory transparency and timeliness through the establishment of target timeframes, the measured approach adopted by the Commonwealth Government recognises the need to retain flexibility for practical purposes given the potential complexities of particular applications and how inflexible timelines can compromise the effectiveness of the regulatory regime. The Authority also supports the proposed approach regarding target time limits in so much as it aligns the National Access Regime more with other industry-specific regimes — the corollary being that the Authority is particularly concerned with the arguments put forward by proponents of more stringent, inflexible timeframes in the context of the Gas Access Regime given such rigid timeframes could dramatically impair effective and informed regulatory decision making.

The Authority acknowledges that the proposed amendment before the Senate Committee regarding pricing principles, whereby the relevant decision maker must have regard to pricing principles to be made by the Minister, appears reasonable in endeavouring to promote consistent and transparent regulatory outcomes over time and therefore providing increased

certainty for industry participants. However the Authority is particularly concerned that the actual principles currently proposed by the Commonwealth Government may fail to achieve the intended objective of promoting greater clarity or certainty in the operation of the National Access Regime.

For example, the Commonwealth Government's proposal that regulated access prices should be set in order to "generate revenue that is *at least* sufficient" does not provide greater clarity or predictability. Instead, such a loosely worded direction increases ambiguity and lessens certainty (and potentially provides greater scope for aggrieved parties to pursue avenues of review).

Further, the Commonwealth Government's reference to *regulatory risk* (i.e. that regulatory decisions should provide for revenue commensurate with regulatory risks involved in service provision) is equally problematic. In particular, it begs the question of what precisely is meant by regulatory risk and whether, in capital markets offering widespread opportunities for portfolio diversification, this risk has any relevance. And, given there has been significant consistency in regulatory decision making and adequacy in regulatory rates of returns, it is difficult to argue there is evidence of significant regulatory risk and hence even more difficult for a decision maker to appropriately compensate for such risk.

It is here where the greatest concern of the Authority becomes evident — that the recommendations put to government and decisions of policy makers may be being inappropriately influenced by unqualified argument and hearsay conjecture manifesting itself in the current debate on economic regulation, without appropriate scrutiny or rigour being applied in assessing the evidence supporting amendment to the regulatory regime. And to the extent to which these types of changes to the National Access Regime may ultimately be incorporated into industry-specific regimes established under the Competition Principles Agreement framework (as per the Commonwealth Government's commitment to work with participating jurisdictions to ensure consistency across regulatory regimes), the Authority is concerned that the proposed pricing principles could have a significant impact on the Authority's regulatory functions.

So despite the construction of the actual ministerial pricing principles perhaps being outside of the strict scope of the Senate Committee's review, it is nevertheless important the Senate Committee be informed of the issues in regulatory policy in order to arrive at a balanced and considered position prior to concluding its deliberations.

The current debate in economic regulation

The Authority notes the recommendations of two analytical bodies charged by the Commonwealth Government to examine issues surrounding investment in significant infrastructure — namely the Productivity Commission Review of the Gas Access Regime (August 2004) and the report of the Prime Minister's Exports and Infrastructure Taskforce (May 2005). The Authority's main concern is that both of these reports have based their respective recommendations on the basis of theoretically constructed cases, but lack factual evidence supporting the conclusions reached regarding the need for consequential amendments to the regulatory regime.

If economic regulation is stifling efficient investment, as the above reports seem to willingly accept, that would be a significant problem and definitely not in the interests of promoting long-term national prosperity. But the question the Authority has been asking is where is the evidence — where is the evidence of inadequate rates of return; where is the evidence of inconsistency in regulators' decisions; where is the evidence that economic regulation is distorting efficient investment?

The Authority has conducted a number of investigations examining the adequacy of regulatory rates of return and the issue of consistency in regulatory decision making across Australia[1]. The Authority has observed a high degree of consistency across jurisdictions in terms of regulatory decisions regarding key parameter estimates. Similarly, the Authority's observations have found that rates of return appear to have been adequate, if not more than adequate relative to other comparable businesses, and sufficient to attract investment.

By way of evidence, Alinta Gas Networks invested more than its forecast 2000-2004 capital expenditure in the Western Australian gas distribution network it operates at the regulated rate of return provided under the Gas Access Regime. Australian Pipeline Trust's acquisition of CMS Energy's interest in the Goldfields Gas Pipeline and further expansion of the pipeline is evidence that investors continue to be comfortable investing in significant infrastructure under the current regulatory regime. Pertinent to note is that this acquisition occurred prior to the amended draft decision under the regulatory regime (and despite outstanding regulatory issues). And the new owner of the Dampier to Bunbury Natural Gas Pipeline submitted in its revised proposed access arrangement a rate of return consistent with current regulatory precedent (implying such is consistent with the legitimate business interests of service providers), which was promptly approved by the regulator[2]. If stakeholder assertions regarding regulatory inconsistency, uncertainty and inadequacy of rates of return really is inhibiting investment it is arguable none of the above would have been observed.

Hence, the Authority is concerned that the only evidence being observed in the current debate is the evidence of some stakeholders pursuing their own inherent business interests. Impartial observers would do well to remember Paul Keating's comment about backing self-interest — you always know it is trying! The beneficiaries of the decade of sustained economic growth resulting from enhanced competition through the regulatory reforms — namely users and consumers — can be forgiven for appearing silent during the debate given the lack of incentive to be vocal (i.e. the benefits realised by individual consumers only become observable in the aggregate, and large users often demonstrate caution before being critical of a major element of their upstream supply chain). However, this doesn't mean their interests are any less important than those of the vocal few, and hence the debate should not be persuaded merely by the commotion of the proponents on one side of the argument. The Senate Committee should be mindful of the potential for such perverse outcomes before acquiescing to the opinions of a vocal few without a full practical assessment of the evidence, unlike the reviews conducted by the two inquiries referenced above.

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[1] For example, see Economic Regulation Authority, *Supplementary submission to the Exports and Infrastructure Taskforce*, 16 May 2005

[2] See Economic Regulation Authority, *Draft decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline*, 11 May 2005 (pages 47-51)

It is generally accepted that the existing regime is beginning to settle, particularly with an increasing body of regulatory precedent emerging, guided by Supreme Court rulings and judgements by review bodies. Accompanying this settling of the regulatory system is a greater level of confidence, both for service providers being able to predictably rely on the outworking of the regime and also owners of investment capital being willing to participate in significant infrastructure investment. Private discussions with key stakeholders suggests there is a large degree of comfort with the certainty the regulatory regime provides — industry appears to be satisfied with the certainty of returns the regime is providing and there appears to be significant interest amongst fund managers to establish infrastructure-based investment vehicles given the certainty of returns the regulatory regime provides.

The danger with embarking on changes at this stage, particularly on the basis of rhetoric, assertions and theoretical conjecture rather than evidence-based reasoning, is that there is greater risk of introducing uncertainty rather than providing greater confidence in the system. Meddling with the system now is more likely to generate uncertainty for providers, consumers and upstream and downstream markets (most importantly for those businesses competing in international markets), and puts at risk the reliability of the regime that the Productivity Commission itself says "*has delivered benefits through determining the terms of third party access to pipelines and facilitating competition in upstream and downstream markets*".[3]

So, to the extent to which the proposed pricing principles (and the more significant changes to the regulatory regime suggested by some stakeholders) represent a potential shift in the current approach to economic regulation, the case for change needs to be strong and substantiated to justify the risk of introducing new regulatory uncertainty. As Productivity Commission Chair Gary Banks said nearly three years ago, "*what is needed is a hard-headed assessment of how imperfect regulations work in correcting imperfect markets, and the gains and losses from their deployment*". Unfortunately, it appears we have yet to witness such an assessment. The Productivity Commission merely conceded "*a study should be conducted by a group of experts…*"[4] rather than conducting such an assessment itself before delivering its final report, and the Infrastructure Taskforce admitted merely relying on being "*told by a number of parties*"[5] as to the need for amendments to the regulatory regime in formulating its recommendations. Hopefully through the Senate Committee's current deliberations, and those of the Ministerial Council of Energy during its consideration of amendments to the Gas Access Regime and the Australian Energy Market Commission in its assessment of the potential impact of regulation within the review of the rules for electricity transmission regulation, such a "hard-headed assessment" will prevail.

Concluding comment and invitation for further discussion

A number of the issues relevant to the Senate Committee's deliberations were explored in greater detail in the recent Utility Regulators Forum paper to the Ministerial Council on Energy and the Authority's submissions to the Infrastructure Taskforce. The views expressed in these submissions reflect regulators' keenness to play a positive role in assisting policy makers' efforts to strengthen competition, encourage investment and achieve

[3] Productivity Commission 2004, *Review of the Gas Access Regime*, Report no. 31, Canberra, 11 June (Finding 4.2 – page 99)

[4] Productivity Commission 2004, *Review of the Gas Access Regime*, Report no. 31, Canberra, 11 June (Recommendation 7.11 – page 302)

[5] Infrastructure Taskforce 2005, *Australia's Export Infrastructure*, Canberra, May (page 36)

greater economic efficiency in the energy market by improving the quality of energy regulation. A copy of the Utility Regulators Forum paper and the Authority's submissions to the Infrastructure Taskforce are attached for the information of the Senate Committee.

The views expressed in this letter and the attached papers provide detailed discussion regarding the merits of any changes to the current regulatory framework and are deserving of consideration by the Senate Committee in the context of its deliberations. To further assist the Senate Committee the Authority would be delighted to avail itself to discuss the above issues in greater detail with the members of the Senate Committee if such an opportunity is available.

Yours sincerely

Lyndon Rowe
Chairman

Enc.

Western Australia

Economic Regulation Authority

Our Ref: 1135/04

7 April 2005

The Hon Ian Macfarlane MP
Chairman
Ministerial Council on Energy
Parliament House
CANBERRA ACT 2600

Dear Chairman

UTILITY REGULATORS FORUM JOINT PAPER TO THE MINISTERIAL COUNCIL ON ENERGY

The Utility Regulators Forum is pleased to take this opportunity to inform the Ministerial Council on Energy (**MCE**) on possible revisions to the energy regulatory environment to achieve greater economic efficiency by enhancing regulatory decision making and appeals processes. Appendix 1 outlines the membership and functions of the Utility Regulators Forum.

The enclosed paper contributes detailed views regarding a range of operationally-based regulatory issues and so informs the MCE deliberations in the context of the energy sector reform program. The Utility Regulators Forum hopes these views are particularly relevant for the development of the joint Commonwealth, State and Territory Government response that is being coordinated through the MCE to the Productivity Commission's Review of the Gas Access Regime.

In particular, this paper provides detailed views regarding:

- support for the incorporation of an overarching objective of economic efficiency to provide clear guidance to regulators for resolving any tension between subordinate objectives in the exercise of regulatory discretion;
- concerns regarding the purported distortionary effects of regulation on investment and the proposed premium to offset regulatory risk, and the need to ensure there is sufficient accountability to secure long-term reliability;
- design issues of the proposed light-handed regulation/monitoring framework that require careful attention;

- concerns regarding the direction of revisions regarding the approach used for setting reference tariffs (particularly the "point within a reasonable range" recommendation);

- the need for appropriate regulatory accounts and information gathering powers to ensure sufficient information for good decision making in regulation; and

- the need for realistic timeframes to undertake reviews.

The views expressed in this paper are focused on a range of operational regulatory issues and on appropriate regulatory amendments that are intended to improve the efficiency and effectiveness of energy regulation. In particular, they are aimed at strengthening competition and encouraging investment in the Australian energy market, consistent with the outcomes sought by the MCE through its efforts to streamline and improve the quality of economic regulation across energy markets.

On behalf of members of the Utility Regulators Forum, I encourage the MCE to consider the views expressed in this paper in the context of the energy sector reform program.

Yours sincerely

LYNDON ROWE
CHAIRMAN
ECONOMIC REGULATION AUTHORITY

On behalf of the Utility Regulators Forum

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THE UTILITY REGULATORS FORUM

In 1997 the Australian Competition and Consumer Commission, in conjunction with other Commonwealth, State and Territory regulatory agencies and policy advisers, established a Utility Regulators Forum.

The Forum's purpose is to foster understanding of the activities of various regulators operating in different jurisdictions and industries as they implement microeconomic reform. The Forum is an acknowledgment of the fact that, in some circumstances, regulators, regulated firms and consumers receive clear benefits from an integrated approach to regulation.

While the specific functions of regulators may vary, all regulators generally aim to encourage efficient price-setting principles, ensure access to essential facilities, and minimise inefficiencies in inter-state trade.

Membership of the Utility Regulators Forum consists of:

ACT Independent Competition and Regulatory Commission (ICRC)

Australian Competition and Consumer Commission (ACCC)

Commerce Commission New Zealand

Economic Regulation Authority, Western Australia (ERA)

Essential Services Commission of South Australia (ESCOSA)

Essential Services Commission, Victoria (ESC)

National Competition Council (NCC)

NSW Independent Pricing and Regulatory Tribunal (IPART)

Office of the Tasmanian Electricity Regulator (OTTER)

Queensland Competition Authority (QCA)

Tasmanian Government Prices Oversight Commission (GPOC)

Utilities Commission Northern Territory

PAPER TO THE MINISTERIAL COUNCIL ON ENERGY
BY THE UTILITY REGULATORS FORUM

INTRODUCTION

In recognition of the importance of the current Ministerial Council on Energy (**MCE**) process for the reform of energy sector policy and regulation in Australia, the Utility Regulators Forum is pleased to take this opportunity to inform the MCE of its views regarding possible revisions to the energy regulatory environment to achieve greater economic efficiency by enhancing regulatory decision making and appeals processes.

The Utility Regulators Forum's views specifically address certain aspects of the Productivity Commission's Review of the Gas Access Regime (**the PC Report**), and are intended to assist the MCE in its coordinating role in the development and implementation of regulatory reforms by the Commonwealth, State and Territory governments in response to that report. However, the Forum's views can also be interpreted more broadly as addressing operational issues that require review and reform in the context of the arrangements that apply in the regulatory sector as a whole. The views also apply irrespective of whether (or when) a single national regulator (the Australian Energy Regulator) is to take over regulatory responsibilities from individual jurisdictional regulators.

Regulators are well placed to provide insights on these issues of importance to the MCE, in light of their considerable practical experience in administering and enforcing the various provisions of the current regulatory regime. The views expressed within this paper are focused on a range of operational regulatory issues and on appropriate regulatory amendments intended to improve the efficiency and effectiveness of energy regulation. In particular they are aimed at strengthening competition and encouraging investment in the Australian energy market, consistent with the outcomes sought by the MCE through its efforts to streamline and improve the quality of economic regulation across energy markets.

OBJECTIVES AND AN OVERARCHING OBJECTS CLAUSE

The lack of clarity about the fundamental objective of the legislation — and about the interaction between, and the emphasis to be placed on, subordinate objectives and criteria in different sections of the legislation — has created uncertainty about its interpretation and application for regulators, access providers and access seekers alike.

Having an overarching objective, as recommended by the Productivity Commission (*PC Report recommendation 5.1*), would assist in bringing more certainty and clarity to the legislation by providing clear guidance to regulators for resolving any tension in subordinate objectives when exercising regulatory discretion. The benefits include: reducing the current uncertainty about the Code's purpose, interpretation and application; providing a guiding reference point for weighting and balancing subordinate objectives and principles in the Code's operational sections; and increasing the consistency of the Code's interpretation and application by regulators, appeal tribunals and the courts.

The Utility Regulators Forum therefore sees significant merit in the introduction of an overarching objective to be applied to the framework for third party access to monopoly infrastructure in the energy sector. The Forum supports the objects clause being couched in terms of focusing on economic efficiency, consistent with the overarching objective of regulatory intervention being to promote – insofar as it is possible – the crucial resource allocation efficiency and overall economic welfare that would otherwise come from a competitive market environment.

However, in our view the introduction of an overarching economic efficiency objective would obviate the need for deletion of the subordinate objectives relating to regulators being required to have regard to the interests of users and the service provider (*PC Report recommendation 5.4*). The Utility Regulators Forum considers the retention of subordinate objectives will assist the regulatory process, by providing guidance to the regulator and interested parties on matters to be taken into account in interpreting the principal objective and in exercising the discretion which that necessarily involves.

REGULATION, INFRASTRUCTURE INVESTMENT AND LONG-TERM RELIABILITY

The PC Report suggests that regulation *may* be having a "chilling" effect on what would otherwise be efficient investment, due to the presence of regulatory risk and/or regulators applying non-commercial rates of return in setting tariffs. The Productivity Commission's recommended changes to address what it regards as being this detrimental consequence of regulation have not been supported by reference to facts, evidence or analysis. Rather the PC Report relies on the first principles, theoretical reasoning to support its conclusions and recommendations based on the view that, in the absence of information on the counterfactual, evidence and analysis cannot be used to reach a conclusive view on the issue.

However, there is little evidence of unwarranted regulatory risk given the consistent approach taken by regulators across Australia in applying the building blocks approach to price cap regulation, particularly with respect to regulated asset values and costs of capital. The owner of any existing or proposed new infrastructure would be able to predict with a considerable degree of certainty, and within fairly narrow ranges, the approach likely to be taken by a regulator. Further, the evidence would suggest that rates of return set by regulators have not been low in commercial terms.[1] Regulated assets remain attractive and profitable investments at regulatory values and rates of return set by regulators, often trading at a premium to their regulated value which arguably suggests that regulated rates of return exceed returns expected by the market from infrastructure assets.[2]

This evidence lends support to the view that regulatory risk is not a significant issue for investors, nor does regulation have a distortionary effect on efficient investment. In the absence of any empirical evidence, there would not appear to be any reason for

[1] For example, see evidence presented in The Allen Consulting Group (2004) and Willett (2005). Indeed, financial analysts in fields unrelated to regulation typically take a much harder line in applying asset pricing models than has been the practice of Australian regulators (e.g. see UBS valuation for Australia Gas Light Company (UBS Investment Research, 31 January 2005) in which a market risk premium of 5% was adopted for valuation purposes.

[2] See article by Glenda Korporaal (*The Australian*, 21/3/05, p29) on profitability of Cheung Kong Infrastructure's Australian assets.

requiring the consideration of a premium to offset regulatory risk (*PC Report recommendation 7.10*). Nor would there appear to be a need for further guidance to prevent regulators from setting non-commercial rates of return or otherwise deterring efficient investment. In fact, to do so would create the real possibility of setting rates of return too high, which would be likely to encourage inefficient investment and/or merely return excessive rents to the service provider.

Beyond the issue regarding the adequacy of revenue and returns, another key issue that requires attention is the need to ensure that service providers are accountable for securing long-term reliability. As has become apparent recently (for example, in the case of Victorian electricity distribution[3]) sufficient regulated returns intended to facilitate timely investment in maintaining and upgrading infrastructure does not automatically translate into actual expenditure to ensure long-term reliability. Lower expenditure on maintenance and replacement of ageing assets by service providers in order to augment earnings may ultimately result in an increasing risk of a catastrophic event or declining future reliability being borne by consumers.

Accordingly, the debate about providing incentives and financing capacity for regulated infrastructure owners to be able to undertake necessary long-term investments needs to be balanced by an explicit recognition of the market power and commercial incentives of natural monopoly infrastructure operators. These are such that infrastructure owners will not necessarily deliver reliability outcomes that serve the public interest simply as a result of providing them with higher regulated revenues and returns.[4]

It is difficult for a regulator to scrutinise the validity and effect of the purported 'efficiency gains' arising from under expenditure on maintenance or replacement (particularly in an environment of less informed regulation as envisaged by the PC Report). Therefore consideration needs to be given as to whether, where regulators have approved prices and revenue earnings sufficient to afford investment in long-term reliability requirements, the current regulatory arrangements offer sufficient assurance to service users that service providers will actually undertake the investment required to deliver reliability in the medium to long term.[5] Service providers need to be sufficiently accountable for long-term service provision (for example, through service standard benchmarks, penalties, licence conditions, etc.) such that the community, having paid prices based on forecast investment requirements, can be confident the pursuit of short-term commercial imperatives does not jeopardise long-term reliability and security of supply.

LIGHT-HANDED REGULATION / MONITORING

One of the key recommendations in the PC Report is the proposal to introduce a lighter-handed form of regulation along side the current access arrangement framework. While this proposal is supported, there are a number of critical design issues that require

[3] For example, see Essential Services Commission, Victoria (2004).

[4] This point applies particularly to existing natural monopoly infrastructure service providers with established upstream and downstream markets. It is necessary to distinguish greenfields infrastructure investments and those that are demonstrably subject to increasing contestability from the analysis presented in this section, which is directed to genuine natural monopolies which are subject to coverage and direct price regulation.

[5] This issue is explored in greater depth in Essential Services Commission, Victoria (2005).

careful attention. In particular, it is necessary to clarify the obligations that will be placed on service providers and the process for switching between the two forms of regulation.

When considering the shape of the light-handed framework it is crucial to note that regulation (including light-handed approaches) will apply only to covered pipelines. Covered pipelines by definition possess a substantial degree of market power that could be used to adversely affect competition in an upstream or downstream market. It is therefore essential that the threat of future regulatory action is clear and credible if more light-handed regulatory approaches are to be effective in preventing the misuse of such substantial market power.

Industry participants must have a clear understanding of the principles of the regime and the consequences of transgression (i.e. reverting to the more heavy-handed regulatory approach in the event of poor behaviour). The credibility of the regime will be determined by the clarity regarding the basis for exercising such a threat, who will make such a decision and their willingness to act upon such a threat.[6] The design of the test for switching between regulatory frameworks requires careful attention and, consistent with the PC Report's objective of reducing the costs of regulation, appeal mechanisms on the form of regulation to apply should be kept to a minimum.

Any effective light-handed regulatory model employed for covered pipelines will also need to address asymmetric information issues. If industry participants believe the regulator will be unable to acquire sufficient information to verify potential breaches, the regulatory threat will not be credible. If information disclosure expectations are made clear at the outset (e.g. specific regulatory accounting guidelines, etc.) many of the problems of asymmetric information can be overcome. Some level of ring fencing may also be needed when the pipeline is part of an integrated business or closely associated with businesses operating in related markets, as vertical integration lessens the potential effectiveness of price-monitoring models when anticompetitive leveraging is possible (particularly if the regulator faces significant information asymmetries). The light-handed regime also must meet the minimum standards of Part IIIA of the *Trade Practices Act 1974* so that it can be certified as effective by the relevant Minister on advice of the National Competition Council (hence providing protection against declaration).

THE APPROACH USED FOR SETTING REFERENCE TARIFFS

The need to clarify the provisions in existing regulatory regimes regarding the approach used in setting reference tariffs (for example, cost allocation, rate of return, etc.) is recognised. However, the direction of the recommended revisions to section 8.31 of the National Gas Code mandating approval of any proposed value that lies within a range of plausible estimates is cause for concern (*PC Report recommendation 7.9*).

[6] For example, due to successive New Zealand governments having staked substantial political capital on the virtues of light-handed regulation, this meant that the threat of regulatory intervention was never particularly credible. Incumbents ultimately discounted the likelihood of regulatory intervention, and the regulatory arrangements constituted very little, if any, constraint on the behaviour of utility businesses – see discussion in NERA 2004 (p27).

Unless specific recognition is given to the range of values reflecting "prevailing conditions in the market for funds" at a point in time, the very wide range of values that may be derived from historical information using statistical analysis may make it difficult for a regulator to reject a value that is clearly inappropriate. The Utility Regulators Forum has significant concerns regarding the PC Report's recommended revisions to the rate of return provisions unless explicit limitations are imposed on the potential breadth of the 'plausible' range. Further, by affording the service provider the ability to select the value from within the range that produces the highest reference tariff, the Productivity Commission's recommended 'point within the range of plausible values' approach undermines the role of the regulator and will seriously compromise the regulatory regime and, therefore, inhibit the achievement of economically efficient outcomes.

In terms of the provisions in existing regulatory regimes, recent and current appeals processes[7] that have suggested that a regulator's task is only to disallow a pricing proposal if it is outside of a 'reasonable range' have the potential to substantially change the application of regulation in a manner that may not have been intended by governments. Such an approach advantages natural monopoly service providers in pursuing their commercial interests through the regulatory process and substantially impedes the capacity of regulators to balance the interests of service providers against those of users and the wider community. There is therefore a need to clarify the legislation's existing provisions in this regard.

The Utility Regulators Forum considers it important that the regulator retains the discretion to decide whether the proposed point estimate is consistent with the regulatory regime's objectives in arriving at an economically efficient outcome. These matters assume even greater significance when it is recognised that minor point adjustments to values such as the rate of return can significantly impact regulated revenue, which could ultimately be to the detriment of competition in upstream and downstream industries.

The Utility Regulators Forum is supportive of flexibility being provided within the regulatory regime for exploring alternative methods for calculating regulated revenues, where they have the potential to create stronger incentives while simultaneously reducing information asymmetry, forecasting problems and the overall cost and intrusiveness of regulation. It is of concern therefore that the Productivity Commission proposes that such innovations in methodology should only be proposed by service providers with the option for regulators to reject proposals that are inconsistent with the principal objective of the regimes (*PC Report recommendation 7.5*). Such an approach would be likely to limit proposals for methodology change to those that were seen as advantageous to service providers and may well exclude a range of methodologies which would overcome current regulatory shortcomings and better achieve the regime's objectives.[8]

[7] For example, the GasNet decision in the Australian Competition Tribunal and the Epic Energy appeal to the Western Australian Gas Review Board.

[8] For example, the current work on exploring total factor productivity as an alternative method for calculating total revenue.

REGULATORY ACCOUNTS DATA AND INFORMATION GATHERING POWERS

Access to relevant data by the regulator is essential for effective regulation of any sort. Informed regulation and public transparency are of particular importance given the monopoly power of service providers, the existence of information asymmetries and the necessity of the regulator being able to objectively assess compliance with the regulatory regime's requirements. Approving regulated revenues under the current building blocks approach, or indeed under alternative methodologies currently being considered (e.g. total factor productivity), relies fundamentally on reliable, credible historical data reported regularly and consistently both to assess and report on performance for reasons of transparency and accountability, and to inform cost and revenue forecasts as the basis for price cap decisions.

Whilst the PC Report goes some way to addressing the issue of maintaining information (e.g. *PC Report recommendation 7.12*), problems remain in implementing requirements for the keeping of regulatory accounts and provision of the information to regulators. The PC Report recommendations appear to lack clarity, particularly with respect to:

- the scope for issuing regulatory accounting guidelines to identify and define the information required, noting that they are only referenced under the ring fencing provisions of the Code;

- the status and appropriateness of Attachment A to the Code, which has never been reviewed in the light of regulatory experience and specifies data which is not relevant while omitting other information relevant to effective regulation; and

- whether the provision of non-financial data is precluded, which will be a significant issue if regulators are constrained from using state-based legislative powers (foreshadowed under *PC Report recommendation 7.14*).

Regulators are conscious of the need to limit data collection to that which is clearly relevant to the task. But to limit information collection which is necessary to effective informed regulation undermines the public policy objectives of the regime. Regulators need sufficient powers and flexibility to specify the financial and non-financial information that is required and the frequency of such information reporting, to suit the different circumstances of each pipeline or electricity network. Even the most light-handed model of regulation requires reliable, credible and consistent information, as regulators operating on insufficient information can leave consumers and/or upstream and downstream markets exposed to the exercise of market power in pricing and service provision.

TIMELINESS AND APPEALS PROCESSES

The recommendation to remove a regulator's ability to extend access arrangement review periods (*PC Report recommendation 11.1*) fails to recognise the reality of regulatory reviews. The approach recommended by the Productivity Commission is incompatible with stakeholders' and review bodies' expectations regarding the level of diligence to be exercised by regulators, and as a result would have the potential to compromise effective decision making. The Utility Regulators Forum is concerned that placing severe limitations on timing for some steps of the process could lead to

regulators being faced with inadequate information thereby deciding not to approve an arrangement that with the benefit of additional information might be approved. However, agreed realistic timeframes for conducting reviews could be contemplated.

Furthermore, there is an element of inconsistency between proposals for more restrictive time limits on regulators whilst also proposing greater scope for review. In light of recent rulings by appeals bodies, there would appear to be a requirement for an even higher and more cautious standard of conduct by the regulator. In order to preserve the level of public consultation that stakeholders expect, regulators are likely to be more inclined to present analysis and take tentative views in issues papers or discussion papers and take more definite positions within their draft decisions, adding to the time required to conduct the approvals process. There is the potential for decisions to be excessively formal and legalistic or for decisions to be structured to minimise the risk of being overturned on appeal rather than to make them readable and comprehensible to a wide range of interested stakeholders.

It is also questionable whether it is efficient for merit review bodies to be tasked with replicating entirely the pricing decisions made by regulatory bodies (*PC Report recommendation 11.4*), as views on these intricate details are developed over much longer periods and with the support of expert analysis and extensive consultation. At the same time, there is the need to curb the incentive for "cherry picking", in reference to service providers challenging specific aspects of decisions in isolation, where there is significant potential upside associated with individual issues when not reviewed from a holistic perspective. Therefore, it is considered the most appropriate role for merit reviews is to focus on remedying clearly inappropriate decisions.

SOURCES AND FURTHER INFORMATION

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Western Australia

Economic Regulation Authority

29 April 2005

Dr Brian Fisher
Chairman
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Dear Dr Fisher

DISCUSSION PAPER: EXPORTS AND INFRASTRUCTURE

I refer to the recent discussion paper on exports and infrastructure in which the taskforce you chair invites submissions from interested parties in relation to bottlenecks that may exist in infrastructure provision which may in turn be limiting Australia's export potential. The delay in this response is regretted.

The views formed by the taskforce and the recommendations put to government potentially have important implications regarding the shape of the future landscape, not just for investment in export infrastructure but also in the approach taken towards regulating key infrastructure facilities that form part of the production process inherent within the export chain.

In light of the extent of recent media coverage critical of infrastructure regulation (on occasion, clearly from a vested interest point of view) it is important that the taskforce be aware of some of the issues in regulatory policy from an operational perspective, in order to arrive at a balanced and considered position prior to delivering its final report to government.

Requirement for economic regulation

The overarching objective of regulation is to promote – insofar as it is possible – the allocative efficiency and overall economic welfare that would otherwise come from a competitive market environment. Monopoly infrastructure is regulated to both facilitate competition in upstream and downstream markets by ensuring access on fair and reasonable terms, and to protect end-users including exporters that compete on international markets (and thereby the efficiency of the economy) by ensuring that service providers are not extracting monopoly rents. It is not to prevent efficient infrastructure investment – such an outcome would not be in the long-term interests of consumers.

While there has been significant media coverage in recent times regarding a number of regulatory decisions, it is important to remember the success of the regulatory regime to date. The Productivity Commission itself acknowledges (in its recent review of the national Gas Access Regime) that the regime "has delivered benefits through determining the terms of third party access to pipelines and facilitating competition in upstream and downstream markets". It would be of concern if the recommendations of the taskforce were to pre-empt, or worse still jeopardise, a rigorous and transparent process of considering appropriate revisions to the regulatory environment such as that already established within the framework of the Ministerial Council on Energy.

Timeliness of regulatory decision making

The decision making process may be protracted at times. If there is a way of improving the regulatory process without watering down its effectiveness in gathering sufficient relevant information in a timely fashion, then this would be appropriate. However, development of an improved mechanism would need to be cognisant of the existence of information asymmetries (and that the design of the regime can encourage service providers to withhold relevant information) and the necessity of regulators having sufficient time to be able to objectively assess compliance with the regulatory regime's requirements. A compromised or rushed regulatory process that does not facilitate a proper consideration of the issues can leave consumers and/or upstream and downstream markets exposed to the exercise of market power in pricing and service provision, leading to significant long term costs and ultimately to the detriment of the Australian economy.

It is our experience that delays are more likely to occur when unrealistic proposals are put forward by asset owners (or when there is an incentive for asset owners to delay the process). When circumstances such as this arise, it is necessary for the regulator to more carefully investigate matters, as information provided in these circumstances cannot be relied on. It is also important that affected parties have a forum and sufficient opportunity to comment (a strong positive factor in support of the current regulatory regime). However, this inevitably leads to a review taking longer than might otherwise be the case if all parties had the incentive to pursue the economically efficient outcome from the beginning.

Indeed the design of the regulatory regime may in fact encourage ambit claims by infrastructure owners in the first instance, in order to preserve upside potential in the final decision of the regulator (or in a subsequent appeals process) taking into account the legitimate business interests of the service provider. The Dalrymple Bay Coal Terminal matter provides some insight regarding this issue. Prime Infrastructure initially sought a significant increase in the regulated tariff (to $2.77/tonne) yet subsequently welcomed the ultimate tariff ruling by the Queensland Competition Authority ($1.72/tonne), describing it as a favourable outcome (and upgrading profit forecasts) despite it falling well short of the ambit claim (and indeed the preceding charge not set through independent regulation of $2.05/tonne).

The difficulty for the regulator in this instance was further exacerbated by the divergent expectations of users relative to the views of the service provider (which, in the Dalrymple Bay Coal Terminal example, could itself also be considered an ambit claim (users suggesting a charge of less than $1.00/tonne), probably similarly

encouraged by the bargaining process inherent within the regime). So it is not surprising a protracted deliberation period was required in order to adequately balance the competing needs of infrastructure users and providers when such divergent expectations were present, notwithstanding the underlying pressure coming from the unprecedented (and unforeseen) increase in demand for coal and export facilities.

The regulatory regime has many examples where realistic claims are processed relatively quickly. The initial round of assessments is always a learning curve for all participants. The next time round all participants are all better informed and more knowledgeable (and, in the case of the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Gas Code), asset values are locked in). Notwithstanding a relatively small number of unique circumstances, second round decisions have generally been quicker.

A regime that people now better understand and is relatively predictable is far more preferable than a continually changing regime that will generate uncertainty, for providers, consumers and upstream and downstream markets (most importantly including those competing in international markets). The case for change needs to be strong and substantiated to justify the risk of introducing new regulatory uncertainty.

Regulatory risk and rates of return

Given the consistent approach taken by regulators across Australia in applying the building blocks approach to price cap regulation (particularly with respect to regulated asset values and costs of capital), it is difficult to argue there is evidence of significant regulatory risk. The owner of any existing or proposed new infrastructure is able to predict with a considerable degree of certainty, and within fairly narrow ranges, the approach likely to be taken by a regulator.

If regulation was stifling efficient investment, that would provide reason to implement changes to the national access regime embodied within Part IIIA of the *Trade Practices Act 1974* and the Gas Code. However, such changes must be based on facts and not assertions. If anything, the available evidence supports a view that regulation has not stifled efficient investment. Regulated assets are popular among investors and generally trade at a premium to their regulated asset value, and the financing industry quite openly acknowledges the high degree of certainty provided by the Gas Code and the consistency in decision-making by regulators based on that Code. Recommending changes to the regulatory regime in a piecemeal way (particularly if progressed through a hurried and less than fully inclusive way) risks generating uncertainty and introducing greater regulatory (and perhaps sovereign) risk which could counteract any efforts to encourage investment in Australia's infrastructure.

Claims by some commentators that "jurisdictional regulators compete to see how low they can go" (in reference to the setting of regulated rates of return) appear to be poorly founded. Interest rates, and hence the cost of borrowing, has been declining for a number of years. It should be no surprise, therefore, that regulated rates of return would follow market trends. Regulators seek to reflect commercial rates of return consistent with efficient investment.

Furthermore, despite heated media debate, the final rate of return handed down by the Queensland Competition Authority for the Dalrymple Bay Coal Terminal is not

outside the range of what other regulators have recently determined for respective infrastructure pricing decisions across Australia. Interestingly, the new owners of the Dampier to Bunbury Natural Gas Pipeline have submitted in their recent proposed access arrangement a proposed rate of return similar to that which was afforded to the Dalrymple Bay Coal Terminal in the recent Queensland Competition Authority decision, implying such a rate of return is consistent with the legitimate business interests of service providers.

It is also worth remembering that regulated tariffs are in the form of 'safety nets' and providers and users (in the case of the Dalrymple Bay Coal Terminal, large coal companies) can come to their own commercial arrangements which a regulator will not interfere with. There is nothing stopping those users (particularly those that are in a strong position, for example large sophisticated companies) from negotiating mutually acceptable terms and conditions with service providers outside of the regulatory regime. The recent sale process of the Dampier to Bunbury Natural Gas Pipeline in Western Australia is a case in point, which included major gas users voluntarily entering into a "Standard Shipper Contract" which differed from the regulated tariff in order to secure immediate capacity expansion of the pipeline (and, according to the new owners, enable a price to be paid for the pipeline which the banks would accept and so remove the banks' ability to restrict capacity expansion).

Concluding comment and invitation for further discussion

A number of the issues discussed above were explored in greater detail in the recent Utility Regulators Forum paper to the Ministerial Council on Energy regarding possible revisions to the energy regulatory environment to achieve greater economic efficiency through enhancing regulatory decision making and appeals processes. The views expressed in the paper reflect the Utility Regulators Forum's keenness to play a positive role in assisting the Ministerial Council on Energy in its efforts to strengthen competition and encourage investment in the energy market by improving the quality of energy regulation. A copy of the Utility Regulators Forum paper is attached for the information of the taskforce.

I believe the views expressed in both the attached paper and this letter are deserving of consideration by the taskforce in the context of its deliberations. I understand the taskforce will be meeting with infrastructure owners, key industry participants and government representatives in Perth on Monday 2 May 2005. As it happens, the Economic Regulation Authority itself is meeting all day in Perth on Monday and we would be delighted to avail ourselves of the opportunity to discuss the above issues in greater detail with the taskforce during its Perth visit. I understand that arrangements are in place for this to happen and I look forward to meeting with you on Monday.

Yours sincerely

LYNDON ROWE
CHAIRMAN

Western Australia

Economic Regulation Authority

16 May 2005

Dr Brian Fisher
Chairman
Infrastructure Taskforce
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Dear Dr Fisher

EXPORTS AND INFRASTRUCTURE TASKFORCE

On behalf of the Economic Regulation Authority (**Authority**), I would like to take this opportunity to express my thanks for the opportunity to meet with members of the Infrastructure Taskforce during its recent visit to Perth.

Following on from some of the key discussion topics during the meeting, I undertook to provide the taskforce with further information in support of my views regarding the consistent approach adopted by regulators across Australia in applying the building blocks approach to price cap regulation.

In the limited time available, I have focused on reviewing the decision making approach with respect to calculating cost of capital parameter values. Reviewing the approach taken towards calculating regulated asset values would represent a prohibitively significant task in such a short timeframe. This is particularly so since asset values are influenced by an array of unique circumstance-specific infrastructure issues (not the least of which arises due to the term "normally" in section 8.11 of the Gas Access Code – in reference to the initial capital base not falling outside the range of depreciated actual cost and depreciated optimised replacement cost – which exacerbates the issue).

The attachments to this letter review the estimated values of comparative weighted average cost of capital (**WACC**) parameters (such as gearing levels, risk premiums and beta values) in recent regulatory decisions. The attachments discuss the extent to which consistency in regulatory decision making is apparent, as well as the relevance of any discrepancies in terms of sensitivity of the final WACC estimate to changes in respective parameter values. Where appropriate, the attachments acknowledge any circumstance-specific issues, as well as how the decision making processes may have matured over time as regulatory expertise has improved and/or the impact of review body decisions that have necessitated a shift in the approach to estimating parameters.

The following table summarises the information in the attachments and highlights the conclusions that can be drawn regarding the extent of consistency apparent in regulatory decision making processes

Table 1: Consistency apparent in estimating parameter values for calculating WACC in regulatory decisions (based on Attachments 1-6)

CAPM Parameter	Average	Conclusion regarding consistency in application by regulators
Market risk premium (*MRP*)	6.0%	86% of regulatory decisions adopt MRP of 6.0, with remaining 14% adopting a range which includes 6.0
Debt to total assets ratio (*D/V*)	60%	All gas and electricity related regulatory decisions adopt debt-to-equity ratio of 60:40
Debt margin (*DM*)[1] *Debt premium* *Debt issuance costs*	1.20% *1.00-1.10%* *0.125%*	87% of regulatory decisions within ±25% of average (i.e. 0.90%-1.50%). Corresponding impact on final WACC of no more than ±15bp
Equity beta (βe)[2]	1.0	80% of gas and electricity decisions within ±20% of average (i.e. 0.8-1.2). Corresponding impact on final WACC of no more than ±30bp
Franking credit value (γ)	0.50	76% of regulatory decisions adopt γ of 0.50, with a further 13% adopting a range which includes 0.50

1. Debt margin consists of the debt premium and an allowance for debt issuance costs
2. At an assumed gearing of 60%

Source: Published regulatory decisions

The conclusions drawn in the table support the points being made regarding the consistency regulators have demonstrated in applying the respective regulatory regimes.

It would also be pertinent to note the Authority's recent draft decision on the proposed access arrangement for the Dampier to Bunbury Natural Gas Pipeline, in which the Authority has approved the rate of return proposed by the pipeline operator. The parameter estimates within the proposed rate of return are consistent with the previous decisions of the Authority and other State and National regulatory bodies regarding rates of return, which accords with the Authority's previously expressed views regarding current regulatory rates of return being consistent with the legitimate business interests of service providers. This example also demonstrates how an efficient and timely approvals process can be achieved when infrastructure owners have reasonable expectations and submit suitable proposals in the first instance (rather than pursuing ambit claims which have the potential delay the process).

During the Authority's meeting with the taskforce, I also stressed the point regarding the confidence of the finance industry regarding predictability of the regime and the attractiveness of regulated assets at current regulatory values and rates of return. In line with this, I note that in its recent "*Industry Report Card: Asia-Pacific Structured Corporate Debt*" (3 May 2005) Standard & Poor's cited "the benign legal and regulatory framework in Australia" as a key factor supporting the continuing significant growth in the Asia-Pacific structured corporate debt market over the next few years.

Accordingly, I reiterate the comments in the Authority's previous submission to the taskforce that the case for any change to the regulatory regime needs to be strong and substantiated to justify the risk of introducing new regulatory uncertainty. A regime that the infrastructure and finance industries understand and is relatively predictable is far more preferable than a continually changing regime that will generate uncertainty.

Yours sincerely

LYNDON ROWE
CHAIRMAN

WESTERN AUSTRALIAN REGULATORY DECISION

The tables below record decisions made by the Economic Regulation Authority (or its predecessor regulatory bodies) regarding WACC parameter value estimates.

Table 1. Market Risk Premium *Source: Published regulatory decisions*

Year	Decision	Parameter value
2000	OffGAR - AlintaGas Networks access arrangement (final decision)	6.00%
2000	OffGAR - CMS (Parmelia Pipeline) access arrangement (final decision)	6.00%
2001	OffGAR - Goldfields Gas Pipeline access arrangement (draft decision)	6.00%
2001	OffGAR - Tubridgie access arrangement (final decision)	6.00%
2003	Rail Access Regulator - WestNet Rail (final determination)	6.00%
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	6.00%
2003	OffGAR – DBNGP access arrangement (final decision)	6.00%
2004	ERA - Goldfields Gas Pipeline access arrangement (amended draft decision)	6.00%
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	6.00%
2005	ERA - AlintaGas Networks revised access arrangement (draft decision)	6.00%
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	6.00%
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	6.00%
2005	ERA - DBNGP revised access arrangement (draft decision)	5.0-6.0%

Table 2. Debt-to-Equity Ratio

Year	Decision	Parameter value
2000	OffGAR - AlintaGas Networks access arrangement (final decision)	60:40
2000	OffGAR - CMS (Parmelia Pipeline) access arrangement (final decision)	60:40
2001	OffGAR - Goldfields Gas Pipeline access arrangement (draft decision)	60:40
2001	OffGAR - Tubridgie access arrangement (final decision)	60:40
2003	Rail Access Regulator - WestNet Rail (final determination)	55:45
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	55:45
2003	OffGAR – DBNGP access arrangement (final decision)	60:40
2004	ERA - Goldfields Gas Pipeline access arrangement (amended draft decision)	60:40
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	60:40
2005	ERA - AlintaGas Networks revised access arrangement (draft decision)	60:40
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	60:40
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	40:60
2005	ERA - DBNGP revised access arrangement (draft decision)	60:40

Table 3. Debt Margin

Year	Decision	Parameter value
2000	OffGAR - AlintaGas Networks access arrangement (final decision)	1.20%
2000	OffGAR - CMS (Parmelia Pipeline) access arrangement (final decision)	1.20%
2001	OffGAR - Goldfields Gas Pipeline access arrangement (draft decision)	1.20%
2001	OffGAR - Tubridgie access arrangement (final decision)	1.20%
2003	Rail Access Regulator - WestNet Rail (final determination) *debt premium* *debt issuance costs*	1.24% *1.11%* *0.125%*
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination) *debt premium* *debt issuance costs*	1.24% *1.11%* *0.125%*
2003	OffGAR – DBNGP access arrangement (final decision)	1.20%
2004	ERA - Goldfields Gas Pipeline access arrangement (amended draft decision)	1.20%
2005	ERA - Western Power Networks (Preferred WACC methodology determination) *debt issuance costs*	*0.125%*
2005	ERA - AlintaGas Networks revised access arrangement (draft decision) *debt premium* *debt issuance costs*	1.125% *1.00%* *0.125%*
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	1.125%
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	1.125%
2005	ERA - DBNGP revised access arrangement (draft decision)	0.98-1.225%

Table 4. Equity Beta

Year	Decision	Parameter value
2000	OffGAR - AlintaGas Networks access arrangement (final decision)	1.08
2000	OffGAR - CMS (Parmelia Pipeline) access arrangement (final decision)	1.33
2001	OffGAR - Goldfields Gas Pipeline access arrangement (draft decision)	1.33
2001	OffGAR - Tubridgie access arrangement (final decision)	1.33
2003	Rail Access Regulator - WestNet Rail (final determination)	1.00
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	0.66
2003	OffGAR – DBNGP access arrangement (final decision)	1.20
2004	ERA - Goldfields Gas Pipeline access arrangement (amended draft decision)	1.33
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	1.00
2005	ERA - AlintaGas Networks revised access arrangement (draft decision)	1.00
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	0.78
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	0.52
2005	ERA - DBNGP revised access arrangement (draft decision)	0.80-1.20

Table 5. Franking Credit Value

Year	Decision	Parameter value
2000	OffGAR - AlintaGas Networks access arrangement (final decision)	50%
2000	OffGAR - CMS (Parmelia Pipeline) access arrangement (final decision)	50%
2001	OffGAR - Goldfields Gas Pipeline access arrangement (draft decision)	50%
2001	OffGAR - Tubridgie access arrangement (final decision)	50%
2003	Rail Access Regulator - WestNet Rail (final determination)	50%
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	50%
2003	OffGAR – DBNGP access arrangement (final decision)	50%
2004	ERA - Goldfields Gas Pipeline access arrangement (amended draft decision)	50%
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	50%
2005	ERA - AlintaGas Networks revised access arrangement (draft decision)	50%
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	50%
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	50%
2005	ERA - DBNGP revised access arrangement (draft decision)	30-60%

Conclusions that can be drawn from information above: The information above demonstrates:

- the Economic Regulation Authority (or its predecessor) has adopted a consistent approach in all gas and electricity-related regulatory decisions regarding market risk premium (*MRP* of 6.00), debt-to-equity ratio (*D/V* of 60:40) and franking credit value (γ of 0.50);

- the Economic Regulation Authority (or its predecessor) has adopted a consistent approach towards calculating the debt premium (DM). Recent decisions have acknowledged that market data regarding debt premium (e.g. CBA Spectrum data) is exhibiting a declining trend, as Australian companies gain greater access to overseas debt markets at lower interest premiums and the increasing utilisation of 'credit wrapping' facilities to improve credit rating and hence reduce premiums; and

- the Economic Regulation Authority (or its predecessor) has adopted a consistent approach towards calculating the equity beta (βe), whilst acknowledging some pipeline-specific factors (e.g. risk associated with under utilisation and/or greater exposure to risk due to servicing cyclical demand associated with mining/resources activities).

NATIONAL REGULATORY DECISIONS: MARKET RISK PREMIUM

The tables below record decisions made by State and National regulators regarding the market risk premium (MRP) parameter used in estimating WACC.

Table 1. Gas regulatory decisions (Market Risk Premium) *Source: Published regulatory decisions*

Year	Decision	Parameter value
1998	ACCC - Transmission Pipelines Australia (final decision)	6.00%
1998	ORG - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	6.00%
2000	OffGAR - AlintaGas Networks (final decision)	6.00%
2000	IPART - AGL Gas Network (NSW) (final decision)	5.0-6.0%
2000	OffGAR - CMS (Parmelia Pipeline) (final decision)	6.00%
2000	ACCC - Central West Pipeline (Marsden to Dubbo) (final decision)	6.00%
2001	OffGAR - Goldfields Gas Pipeline (draft decision)	6.00%
2001	OffGAR – Tubridgie Pipeline (final decision)	6.00%
2001	QCA - Queensland Gas Distribution Networks (Allgas and Envestra) (final decision)	6.00%
2002	ACCC - Moomba to Adelaide Pipeline System (final decision)	6.00%
2002	ESC - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	6.00%
2002	ACCC - Victorian Gas Transmission System (GasNet) (final decision)	6.00%
2003	ACCC - Amadeus to Darwin Pipeline (NT Gas) (final decision)	6.00%
2003	ACCC - Moomba to Sydney Pipeline (EAPL) (final decision)	6.00%
2003	OffGAR - DBNGP (final decision)	6.00%
2004	ERA - Goldfields Gas Pipeline (amended draft decision)	6.00%
2004	ICRC - ActewAGL Natural Gas System (final decision)	6.00%
2005	ERA - AlintaGas Networks (draft decision)	6.00%
2005	IPART - AGL Gas Network (NSW) (final report)	5.5-6.5%
2005	ERA - DBNGP (draft decision)	5.0-6.0%

Table 2. Electricity regulatory decisions (MRP)

Year	Decision	Parameter value
1999	IPART - NSW Electricity Network Service Providers (final decision)	5.0-6.0%
2000	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	6.00%
2001	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	6.00%
2001	ORG - Victorian Electricity Distribution Networks (AGL, CitiPower, Powercor, TXU, United Energy) (final determination)	6.00%
2001	ACCC - Queensland Transmission Network (Powerlink) (final decision)	6.00%
2002	ACCC - South Australian Transmission Network (ElectraNet SA) (final decision)	6.00%

Table 2 (cont.) Electricity regulatory decisions (MRP)

2002	ACCC - Victorian Transmission Network (SPI PowerNet and VenCorp) (final decision)	6.00%
2003	ACCC - Tasmania Transmission Network (Transend Networks) (final decision)	6.00%
2004	ICRC - ActewAGL Electricity Distribution Network (final decision)	6.00%
2004	IPART - NSW Electricity Network Service Providers (final decision)	5.0-6.0%
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	6.00%
2005	ESCOSA - ETSA Utilities (final determination)	6.00%
2005	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	6.00%
2005	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	6.00%

Table 3. Other (non-gas and non-electricity) regulatory decisions (MRP)

Year	Decision	Parameter value
2000	IPART - Sydney Water Corporation (final decision)	5.0-6.0%
2001	QCA - Queensland Rail (QR) (final decision)	6.00%
2002	ACCC - Australian Rail Track Corporation (ARTC) (final decision)	6.00%
2003	Rail Access Regulator - WestNet Rail (final determination)	6.00%
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	6.00%
2005	ESC - Victorian Metropolitan and Regional Urban Water Businesses (draft decision)	6.00%
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	6.00%
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	6.00%
2005	QCA - Gladstone Area Water Board (final report)	6.00%
2005	QCA - Dalrymple Bay Coal Terminal (final decision)	6.00%

Conclusions that can be drawn from information above: The information above demonstrates that regulators have adopted consistent approaches towards calculating the MRP parameter:

- 86% of regulatory decisions adopt a MRP of 6.0%; and

- the remaining 14% of decisions adopt a range for MRP which includes 6.0%.

Whilst some infrastructure owners have argued for a higher value for MRP (6.5%-7.0%), recent analysis indicates the MRP may in fact be lower than 6.0% (between 5.0-6.0%) (e.g. Essential Services Commission, October 2002, Review of Gas Access Arrangements: Final Decision, pp332-356, citing Jardine Fleming Capital Partners Limited, (September, 2001) *The Equity Risk Premium – An Australian Perspective*, Trinity Best Practice Committee). For information, a ±100bp change in MRP can equate to a ±30bp change in WACC. For this reason, regulators have generally accepted the industry standard in regulatory decisions.

NATIONAL REGULATORY DECISIONS: DEBT-TO-EQUITY RATIO

The tables below record decisions made by State and National regulators regarding the Debt-to-Equity ratio parameter used in estimating WACC.

Table 1. Gas regulatory decisions (Debt-to-Equity Ratio) *Source: Published regulatory decisions*

Year	Decision	Parameter value
1998	ACCC - Transmission Pipelines Australia (final decision)	60:40
1998	ORG - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	60:40
2000	OffGAR - AlintaGas Networks (final decision)	60:40
2000	IPART - AGL Gas Network (NSW) (final decision)	60:40
2000	OffGAR - CMS (Parmelia Pipeline) (final decision)	60:40
2000	ACCC - Central West Pipeline (Marsden to Dubbo) (final decision)	60:40
2001	OffGAR - Goldfields Gas Pipeline (draft decision)	60:40
2001	OffGAR – Tubridgie Pipeline (final decision)	60:40
2001	ACCC - Queensland Gas Pipeline (Wallumbilla to Gladstone via Rockhamption) (final decision)	60:40
2001	QCA - Queensland Gas Distribution Networks (Allgas and Envestra) (final decision)	60:40
2002	ACCC - South West Queensland Pipeline (Ballera to Wallumbilla) (final decision)	60:40
2002	ACCC - Moomba to Adelaide Pipeline System (final decision)	60:40
2002	ACCC - Roma to Brisbane Pipeline (final decision)	60:40
2002	ACCC - Carpentaria Gas Pipeline (Ballera to Mt Isa) (final decision)	60:40
2002	ESC - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	60:40
2002	ACCC - Victorian Gas Transmission System (GasNet) (final decision)	60:40
2003	ACCC - Amadeus to Darwin Pipeline (NT Gas) (final decision)	60:40
2003	ACCC - Moomba to Sydney Pipeline (EAPL) (final decision)	60:40
2003	OffGAR - DBNGP (final decision)	60:40
2004	ERA - Goldfields Gas Pipeline (amended draft decision)	60:40
2004	ICRC - ActewAGL Natural Gas System (final decision)	60:40
2005	ERA - AlintaGas Networks (draft decision)	60:40
2005	IPART - AGL Gas Network (NSW) (final report)	60:40
2005	ERA - DBNGP (draft decision)	60:40

Table 2. Electricity regulatory decisions (Debt-to-Equity Ratio)

Year	Decision	Parameter value
1999	IPART - NSW Electricity Network Service Providers (final decision)	60:40
2000	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	60:40
2001	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	60:40
2001	ORG - Victorian Electricity Distribution Networks (AGL, CitiPower, Powercor, TXU, United Energy) (final determination)	60:40
2001	ACCC - Queensland Transmission Network (Powerlink) (final decision)	60:40
2002	ACCC - South Australian Transmission Network (ElectraNet SA) (final decision)	60:40

Table 2 (cont.) Electricity regulatory decisions (Debt-to-Equity Ratio)

2002	ACCC - Victorian Transmission Network (SPI PowerNet and VenCorp) (final decision)	60:40
2003	ACCC - Tasmania Transmission Network (Transend Networks) (final decision)	60:40
2004	ICRC - ActewAGL Electricity Distribution Network (final decision)	60:40
2004	IPART - NSW Electricity Network Service Providers (final decision)	60:40
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	60:40
2005	ESCOSA - ETSA Utilities (final determination)	60:40
2005	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	60:40
2005	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	60:40

Table 3. Other (non-gas and non-electricity) regulatory decisions (Debt-to-Equity Ratio)

Year	Decision	Parameter value
2000	IPART - Sydney Water Corporation (final decision)	60:40
2001	QCA - Queensland Rail (QR) (final decision)	55:45
2002	ACCC - Australian Rail Track Corporation (ARTC) (final decision)	60:40
2003	Rail Access Regulator - WestNet Rail (final determination)	55:45
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	55:45
2005	ESC - Victorian Metropolitan and Regional Urban Water Businesses (draft decision)	60:40
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	60:40
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	40:60
2005	QCA - Gladstone Area Water Board (final report)	50:50
2005	QCA - Dalrymple Bay Coal Terminal (final decision)	60:40

Conclusions that can be drawn from information above: The information above demonstrates that regulators have adopted a debt-to-equity ratio of 60:40 for all gas and electricity related regulatory decisions. This is consistent with regulators' views regarding providing infrastructure owners with the incentive to pursue efficient financing structures.

Debt-to-equity ratios lower than the accepted 60:40 industry standard have only been adopted in specific circumstances, for example rail and water scheme related decisions in Queensland and Western Australia (industries with markedly different characteristics to the energy sector).

NATIONAL REGULATORY DECISIONS: DEBT MARGIN

The tables below record decisions made by State and National regulators regarding the debt margin parameter used in estimating WACC.

Table 1. Gas regulatory decisions (Debt Margin) *Source: Published regulatory decisions*

Year	Decision	Parameter value
1998	ACCC - Transmission Pipelines Australia (final decision)	1.20%
1998	ORG - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	1.20%
2000	OffGAR - AlintaGas Networks (final decision)	1.20%
2000	IPART - AGL Gas Network (NSW) (final decision)	0.90-1.10%
2000	OffGAR - CMS (Parmelia Pipeline) (final decision)	1.20%
2000	ACCC - Central West Pipeline (Marsden to Dubbo) (final decision)	1.20%
2001	OffGAR - Goldfields Gas Pipeline (draft decision)	1.20%
2001	OffGAR – Tubridgie Pipeline (final decision)	1.20%
2001	QCA - Queensland Gas Distribution Networks (Allgas and Envestra) (final decision)	1.55%
2002	ACCC - Moomba to Adelaide Pipeline System (final decision)	1.20%
2002	ESC - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision) *includes debt issuance costs*	1.70% *0.05%*
2002	ACCC - Victorian Gas Transmission System (GasNet) (final decision) *includes debt issuance costs*	1.59% *0.125%*
2003	ACCC - Amadeus to Darwin Pipeline (NT Gas) (final decision)	1.54%
2003	Australian Competition Tribunal - Victorian Gas Transmission System (GasNet) (appeal decision) *debt issuance costs*	 *0.25%*
2003	ACCC - Moomba to Sydney Pipeline (EAPL) (final decision)	0.92%
2003	OffGAR - DBNGP (final decision)	1.20%
2004	ERA - Goldfields Gas Pipeline (amended draft decision)	1.20%
2004	ICRC - ActewAGL Natural Gas System (final decision)	1.245-1.43%
2005	ERA - AlintaGas Networks (draft decision) *debt premium* *debt issuance costs*	1.125% *1.00%* *0.125%*
2005	IPART - AGL Gas Network (NSW) (final report)	1.13-1.22%
2005	ERA - DBNGP (draft decision)	0.98-1.225%

Table 2. Electricity regulatory decisions (Debt Margin)

Year	Decision	Parameter value
1999	IPART - NSW Electricity Network Service Providers (final decision)	0.80-1.00%
2000	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	1.00%
2001	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	1.70%
2001	ORG - Victorian Electricity Distribution Networks (AGL, CitiPower, Powercor, TXU, United Energy) (final determination)	1.50%
2001	ACCC - Queensland Transmission Network (Powerlink) (final decision)	1.20%
2002	ACCC - South Australian Transmission Network (ElectraNet SA) (final decision)	1.22%

Table 2 (cont.) Electricity regulatory decisions (Debt Margin)

2002	ACCC - Victorian Transmission Network (SPI PowerNet and VenCorp) (final decision)	1.20%
2003	ACCC - Tasmania Transmission Network (Transend Networks) (final decision)	0.91%
2004	ICRC - ActewAGL Electricity Distribution Network (final decision) *debt premium* *debt issuance costs*	1.245% *1.12%* *0.125%*
2004	IPART - NSW Electricity Network Service Providers (final decision)	0.90%-1.10%*
2005	ERA - Western Power Networks (Preferred WACC methodology determination) *debt issuance costs*	*0.125%*
2005	ESCOSA - ETSA Utilities (final determination) *debt premium* *debt issuance costs* *allowance for hedging costs*	1.64% *1.34%* *0.125%* *0.1825%*
2005	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	0.90%
2005	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination) *including debt issuance costs*	1.22% *0.125%*

* Decision referenced allowance of 12.5bp for debt issuance costs, not included in debt margin

Table 3. Other (non-gas and non-electricity) regulatory decisions (Debt Margin)

Year	Decision	Parameter value
2000	IPART - Sydney Water Corporation (final decision)	0.80-1.00%
2001	QCA - Queensland Rail (QR) (final decision)	1.20%
2002	ACCC - Australian Rail Track Corporation (ARTC) (final decision)	1.20%
2003	Rail Access Regulator - WestNet Rail (final determination) *debt premium* *debt issuance costs*	1.24% *1.11%* *0.125%*
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination) *debt premium* *debt issuance costs*	1.24% *1.11%* *0.125%*
2005	ESC - Victorian Metropolitan and Regional Urban Water Businesses (draft decision)	1.10%
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	1.125%
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	1.125%
2005	QCA - Gladstone Area Water Board (final report)	1.32%
2005	QCA - Dalrymple Bay Coal Terminal (final decision)	1.30%

Conclusions that can be drawn from information above: The information above demonstrates:

- the average value adopted by regulators in decisions is for a debt margin of around 1.20%;

- 87% of regulatory decisions fall within ±25% of the average (i.e. between 0.90% and 1.50%). For information, a ±25% variation in the debt margin parameter has a corresponding impact on the final WACC estimate of no more than ±15 basis points;

- recent decisions have acknowledged that market data regarding debt premium (e.g. CBA Spectrum data) is exhibiting a declining trend, as Australian companies gain greater access to overseas debt markets at lower interest premiums and availability of 'credit wrapping' facilities to improve credit rating and hence reduce premiums; and

- where explicitly acknowledged, regulators have adopted a relatively consistent approach towards making an allowance for debt issuance costs (usually 12.5 basis points).

NATIONAL REGULATORY DECISIONS: EQUITY BETA

The tables below record decisions made by State and National regulators regarding the equity beta parameter used in estimating WACC.

Table 1. Gas regulatory decisions (Equity Beta) *Source: Published regulatory decisions*

Year	Decision	Parameter value
1998	ACCC - Transmission Pipelines Australia (final decision)	1.20
1998	ORG - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	1.20
2000	OffGAR - AlintaGas Networks (final decision)	1.08
2000	IPART - AGL Gas Network (NSW) (final decision)	0.90-1.10
2000	OffGAR - CMS (Parmelia Pipeline) (final decision)	1.33
2000	ACCC - Central West Pipeline (Marsden to Dubbo) (final decision)	1.50
2001	OffGAR - Goldfields Gas Pipeline (draft decision)	1.33
2001	OffGAR – Tubridgie Pipeline (final decision)	1.33
2001	QCA - Queensland Gas Distribution Networks (Allgas and Envestra) (final decision)	0.99
2002	ACCC - Moomba to Adelaide Pipeline System (final decision)	1.16
2002	ESC - Victorian Gas Distribution Networks (Mulitnet, Westar and Stratus) (final decision)	1.00
2002	ACCC - Victorian Gas Transmission System (GasNet) (final decision)	1.00
2003	ACCC - Amadeus to Darwin Pipeline (NT Gas) (final decision)	1.00
2003	ACCC - Moomba to Sydney Pipeline (EAPL) (final decision)	1.00
2003	OffGAR - DBNGP (final decision)	1.20
2004	ERA - Goldfields Gas Pipeline (amended draft decision)	1.33
2004	ICRC - ActewAGL Natural Gas System (final decision)	0.90-1.09
2005	ERA - AlintaGas Networks (draft decision)	1.00
2005	IPART - AGL Gas Network (NSW) (final report)	0.80-1.00
2005	ERA - DBNGP (draft decision)	0.80-1.20

Table 2. Electricity regulatory decisions (Equity Beta)

Year	Decision	Parameter value
1999	IPART - NSW Electricity Network Service Providers (final decision)	0.78-1.14
2000	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	0.78-1.25
2001	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	0.70
2001	ORG - Victorian Electricity Distribution Networks (AGL, CitiPower, Powercor, TXU, United Energy) (final determination)	1.00
2001	ACCC - Queensland Transmission Network (Powerlink) (final decision)	1.00
2002	ACCC - South Australian Transmission Network (ElectraNet SA) (final decision)	1.00

Table 2 (cont.) Electricity regulatory decisions (Equity Beta)

2002	ACCC - Victorian Transmission Network (SPI PowerNet and VenCorp) (final decision)	1.00
2003	ACCC - Tasmania Transmission Network (Transend Networks) (final decision)	1.00
2004	ICRC - ActewAGL Electricity Distribution Network (final decision)	0.90
2004	IPART - NSW Electricity Network Service Providers (final decision)	0.78-1.11
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	1.00
2005	ESCOSA - ETSA Utilities (final determination)	0.80
2005	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	1.00
2005	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	0.90

Table 3. Other (non-gas and non-electricity) regulatory decisions (Equity Beta)

Year	Decision	Parameter value
2000	IPART - Sydney Water Corporation (final decision)	0.65-1.02
2001	QCA - Queensland Rail (QR) (final decision)	0.76
2002	ACCC - Australian Rail Track Corporation (ARTC) (final decision)	1.27
2003	Rail Access Regulator - WestNet Rail (final determination)	1.00
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	0.66
2005	ESC - Victorian Metropolitan and Regional Urban Water Businesses (draft decision)	0.75
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	0.78
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	0.52
2005	QCA - Gladstone Area Water Board (final report)	0.65
2005	QCA - Dalrymple Bay Coal Terminal (final decision)	1.00

Conclusions that can be drawn from information above: The information above demonstrates:

- the average decision adopted by regulators is a equity beta of around 1.00;

- 80% of regulatory decisions fall within ±20% of the average (i.e. between 0.80 and 1.20). The predominant number of the results outside of this range as with respect to water-related decisions (reflecting the lower volatility and risk exposure of water service provision activities). For information, a ±20% variation in the equity beta parameter has a corresponding impact on the final WACC estimate of no more than ±30 basis points; and

- whilst adopting a consistent approach, regulators have acknowledged some pipeline-specific factors (e.g. risk associated with greenfields infrastructure, under utilisation and/or greater exposure to risk due to cyclical demand associated with servicing mining/resources activities rather than a consistent population base).

NATIONAL REGULATORY DECISIONS: FRANKING CREDIT VALUE

The tables below record decisions made by State and National regulators regarding the franking credit value parameter used in estimating WACC.

Table 1. Gas regulatory decisions (Franking Credit Value) *Source: Published regulatory decisions*

Year	Decision	Parameter value
1998	ACCC - Transmission Pipelines Australia (final decision)	50%
2000	OffGAR - AlintaGas Networks (final decision)	50%
2000	IPART - AGL Gas Network (NSW) (final decision)	30-50%
2000	OffGAR - CMS (Parmelia Pipeline) (final decision)	50%
2000	ACCC - Central West Pipeline (Marsden to Dubbo) (final decision)	50%
2001	OffGAR - Goldfields Gas Pipeline (draft decision)	50%
2001	OffGAR – Tubridgie Pipeline (final decision)	50%
2001	ACCC - Queensland Gas Pipeline (Wallumbilla to Gladstone via Rockhamption) (final decision)	0%
2001	QCA - Queensland Gas Distribution Networks (Allgas and Envestra) (final decision)	50%
2002	ACCC - South West Queensland Pipeline (Ballera to Wallumbilla) (final decision)	0%
2002	ACCC - Moomba to Adelaide Pipeline System (final decision)	50%
2002	ACCC - Roma to Brisbane Pipeline (final decision)	0%
2002	ACCC - Carpentaria Gas Pipeline (Ballera to Mt Isa) (final decision)	0%
2002	ACCC - Victorian Gas Transmission System (GasNet) (final decision)	50%
2003	ACCC - Amadeus to Darwin Pipeline (NT Gas) (final decision)	50%
2003	ACCC - Moomba to Sydney Pipeline (EAPL) (final decision)	50%
2003	OffGAR - DBNGP (final decision)	50%
2004	ERA - Goldfields Gas Pipeline (amended draft decision)	50%
2004	ICRC - ActewAGL Natural Gas System (final decision)	30-50%
2005	ERA - AlintaGas Networks (draft decision)	50%
2005	IPART - AGL Gas Network (NSW) (final report)	30-50%
2005	ERA - DBNGP (draft decision)	30-60%

Table 2. Electricity regulatory decisions (Franking Credit Value)

Year	Decision	Parameter value
1999	IPART - NSW Electricity Network Service Providers (final decision)	30-50%
2000	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	50%
2001	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	50%
2001	ORG - Victorian Electricity Distribution Networks (AGL, CitiPower, Powercor, TXU, United Energy) (final determination)	50%
2001	ACCC - Queensland Transmission Network (Powerlink) (final decision)	50%
2002	ACCC - South Australian Transmission Network (ElectraNet SA) (final decision)	50%

Table 2 (cont.) Electricity regulatory decisions (Franking Credit Value)

2002	ACCC - Victorian Transmission Network (SPI PowerNet and VenCorp) (final decision)	50%
2003	ACCC - Tasmania Transmission Network (Transend Networks) (final decision)	50%
2004	ICRC - ActewAGL Electricity Distribution Network (final decision)	50%
2004	IPART - NSW Electricity Network Service Providers (final decision)	50%
2005	ERA - Western Power Networks (Preferred WACC methodology determination)	50%
2005	ESCOSA - ETSA Utilities (final determination)	50%
2005	ACCC - NSW and ACT Transmission Networks (TransGrid and EnergyAustralia) (final decision)	50%
2005	QCA - Queensland Distribution Networks (Ergon and Energex) (final determination)	50%

Table 3. Other (non-gas and non-electricity) regulatory decisions (Franking Credit Value)

Year	Decision	Parameter value
2000	IPART - Sydney Water Corporation (final decision)	30-50%
2001	QCA - Queensland Rail (QR) (final decision)	50%
2002	ACCC - Australian Rail Track Corporation (ARTC) (final decision)	50%
2003	Rail Access Regulator - WestNet Rail (final determination)	50%
2003	Rail Access Regulator - Western Australian Government Railways Commission (final determination)	50%
2005	ESC - Victorian Metropolitan and Regional Urban Water Businesses (draft decision)	50%
2005	ERA - Water Corporation (Urban Water Inquiry Draft Report)	50%
2005	ERA - AQWEST and Busselton Water (Urban Water Inquiry Draft Report)	50%
2005	QCA - Gladstone Area Water Board (final report)	50%
2005	QCA - Dalrymple Bay Coal Terminal (final decision)	50%

Conclusions that can be drawn from information above: The information above demonstrates that regulators have adopted to date generally adopted a γ value of 0.50 (76% of regulatory decisions adopt an γ of 0.50; and a further 13% of decisions adopt a range for γ which includes 0.50).

The regulatory precedent for regulators' adoption of 0.50 is based on the 1999 study by Hathaway and Officer, which estimates gamma at close to 0.50 (Hathaway, N. and R.R. Officer (1999), *The Value of Imputation Tax Credits*, Unpublished Manuscript, Graduate School of Management, University of Melbourne). It is noted that that the study upon which this regulatory precedent is based has recently been updated by the authors and the estimate of gamma revised to between 0.28 and 0.36 (Hathaway, Neville and Officer, Bob (2004), *The Value of Imputation Tax Credits: Update 2004*, Capital Research Pty Ltd). The appropriate value to be assumed for the value of imputation credits is highly contentious, and in the absence of a definitive resolution, the Economic Regulation Authority has adopted a consistent approach (as have most other regulators). However given the difference between a γ value of 0.50 and 0.30 can equate to a corresponding impact on WACC of up to ±25bp, the issue remains under ongoing investigation.