Rule change proposal

Price and revenue regulation of gas distribution and transmission services

AER's proposed changes to the rate of return provisions of the National Gas Rules

September 2011

AUSTRALIAN ENERGY REGULATOR

For the purposes of section 298 of the *National Gas Law*, this rule change is proposed by:

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The following matters are set out in this document:

- description of the Rules that the AER proposes be made
- a statement of the nature and scope of the issue that is proposed to be addressed and an explanation of how the proposed Rule would address the issue
- an explanation of how the proposed Rules will or is likely to contribute to the achievement of the national gas objective
- an explanation of the expected benefits and costs and the potential impacts of the proposed Rules on those likely to be affected.

This document is to be read together with the AER's rule change proposal to the *National Electricity Rules* regarding the economic regulation of network businesses: see AER, *Rule change proposal: Economic regulation of network businesses: AER's proposed changes to the National Electricity Rules,* September 2011, section 7.

Contents

1 Introduction

Among its roles, the Australian Energy Regulator (AER) is responsible for the economic regulation of gas transmission and distribution pipeline services in all states and territories except Western Australia. The AER undertakes this regulatory role under the *National Gas Law* (NGL) and *National Gas Rules* (NGR).

Since the introduction of the NGL and NGR, seven reviews of access arrangements for gas distribution and transmission businesses have been completed. While the regulatory framework is operating well in general, the rate of return provisions of the NGR can be improved. Aligning certain provisions of the NGR with those of chapter 6A of the *National Electricity Rules* (NER) will improve those provisions.

In particular, this rule change proposal ensures that the weighted average cost of capital (WACC) parameters are reviewed at least every five years, in conjunction with the review of the electricity WACC parameters. This would replace the current provisions of the NGR that require the AER to reconsider those parameters for each access arrangement proposal. Also, it is proposed that a nominal post tax framework be mandated in the NGR, as well as prescription of the capital asset pricing model (CAPM) similar to the provisions of the NER. These changes will make an important contribution to furthering the National Gas Objective (NGO).

The AER has also submitted to the AEMC a rule change proposal in relation to the NER, which proposes to align the chapter 6 provisions with the provisions of chapter 6A of the NER. Many of the arguments put forward for aligning chapter 6 with chapter 6A of the NER are the same for aligning certain provisions of the NGR with chapter 6A of the NER. Accordingly, those arguments are repeated in this rule change proposal for the NGR.

The AER has also sought independent legal advice from Stephen Lloyd SC on whether the draft rules allow for the AER to make cost of capital decisions in access arrangement decisions that are consistent with the NGO and the revenue and pricing principles set out in the NGL.

This advice has also been provided with this rule change proposal.

The remainder of this document is structured as outlined in the AEMC's guidelines.[1] This includes a description of the proposed rule change, a statement of the relevant issues, a discussion on how the proposed rule change contributes to the NGO, and the expected costs and benefits. Draft rules prepared by the AER are set out in Appendix A.

This document is also to be read together with the AER's NER rule change proposal regarding the economic regulation of network businesses.[2]

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1 AEMC, *National Gas Rules – Guidelines, Guidelines for proponents: Preparing a Rule change proposal*, May 2009.

2 AER, *Rule change proposal: Economic regulation of network businesses: AER's proposed changes to the National Electricity Rules*, September 2011, section 7.

2 WACC reviews

2.1 Current rules

Unlike the NER, the NGR do not provide for any processes for considering the rate of return outside the access arrangement review process. The NER, however, provides for a periodic 'WACC review' process outside of each transmission and distribution determination.

2.2 Nature and scope of issues with current rules

In considering issues with the current NGR rate of return provisions it is worthwhile revisiting the justifications of the AEMC in drafting the corresponding framework in chapter 6A as well as of the Ministerial Council on Energy (MCE).

The AEMC's considerations in codifying WACC review outcomes in the current chapter 6A of the NER were as follows:

- there was a high degree of stability in parameter values adopted by the regulator in the years leading up to the AEMC's review
- the savings in administrative costs and reduced uncertainty through codifying WACC parameters would offset any expected benefits of a reassessment of the WACC at every transmission determination
- having short term stability in WACC parameters would create a more stable investment environment
- sufficient flexibility to account for developments in theory and market conditions should be provided through a periodic review of WACC parameters by the AER, subject to any discretion and judgment being exercised in accordance with clear criteria.[3]

On the other hand, the MCE's decision to allow departures from WACC review outcomes at each distribution determination under chapter 6 of the NER was based on the pre-existing differences in WACC parameters across jurisdictions at the time:

> SCO considers that given the different parameters adopted by jurisdictions to date, it is appropriate not to replicate the AEMC transmission rules and allow distribution to converge, should the AER consider it appropriate, over time.[4]

In considering provisions in the NGR, the MCE did not comment on the merits of employing a uniform approach across gas access determinations, yet conceivably convergence between electricity and gas WACC frameworks was something to be considered over time:

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[3] AEMC, *National electricity amendment (Economic regulation of transmission services) rule 2006—Rule determination*, 16 November 2006, p. 83.

[4] MCE SCO, *Response to stakeholder comments on the Exposure Draft of the National Electricity Rules for distribution revenue and pricing*, p. 16.

> …the initial NGR will largely replicate the wording of the current Gas Code test, which has proved to be adequate. However, MCE will require the AEMC to undertake a review of how WACC is determined under the gas access regime, and report to MCE within a given timeframe.[5]

The MCE also commented that regulators should be able to adopt a presumption that previous WACC parameters were appropriate, subject to persuasive evidence to the contrary.[6] This was noted in the context of:

> …reviews over inputs into the estimation of the WACC over which there is substantial statistical uncertainty (the concern being that the lack of precision in parameter estimates could give rise to substantial variation in rates of return merely from different interpretations of the same set of data).[7]

While the AEMC's scope in conducting its review was limited to electricity transmission, the AER's experience has shown that its considerations are generic to all regulated energy service providers. Importantly, the savings in administrative costs and improved investment outcomes for transmission networks considered by the AEMC would also be relevant in the context of gas regulation, and perhaps more so where there are a greater number of regulated gas pipelines. More generally, there appears to be no justification for having differences across sectors with regards to the legal requirements and other processes for setting the WACC, given the rate of return is predominantly based on market and sector wide benchmarks. An unintended consequence of having different WACC frameworks is that they could produce different benchmark parameters (in particular the MRP) when the risks of investment reflected in these parameters should be the same across all regulated energy networks. This gives rise to investment distortions between sectors.

Another implication of establishing a WACC framework that is binding in chapter 6A, but not in chapter 6 or in the NGR, was that it resulted in an immediate convergence in parameters from previous jurisdictional outcomes for electricity network businesses. It is important to note that the AER's 2009 WACC review could have resulted in different parameters being determined for transmission and distribution businesses, but this does not imply that separate rule provisions or processes for setting the WACC should apply, nor does it detract from the benefits of being able to consider whether there is a need for different parameters between different classes of energy networks (including gas service providers) as part of a single WACC review process.

The cost of capital has a significant impact on revenue requirements and end user prices.[8] This provides incentives for regulated businesses to invest significant resources in cost of capital arguments and requires extensive consideration by the AER in regulatory decisions, even though, by their very nature, WACC parameters

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[5] MCE SCO, *Response to issues raised in submissions on the national gas rules*, 14 May 2007, p. 10.

[6] MCE SCO, *2006 Legislative Package: Initial National Gas Rules*, Explanatory material attached to Energy Market Reform Bulletin No.74, November 2006, pp. 20–1.

[7] ibid., p. 20.

[8] For example, in the recent reviews of the access arrangements for the gas distribution networks of APT Allgas, Envestra (SA) and Envestra (Qld), the return on capital as a percentage of total costs was around 63 per cent, 56 per cent and 56 per cent respectively.

are slow to change over time with developments in data and theory. In addition, stability in WACC parameters over time is important in providing investment certainty.

For many parameters, the current rule framework in the NGR provides for the AER and service providers to be in continual ‘WACC review’ mode where considerable resources are spent at each access arrangement review. The incentive for service providers to argue with the AER has also resulted in reviews by the Australian Competition Tribunal (Tribunal) in pursuing a level of precision which can only be considered spurious in the context of many WACC parameters.

The current NER provides for the AER to undertake a thorough review in the context of electricity network regulation and made an overall decision which reflects the views and interests of all stakeholders. This decision has important implications for the gas sector given almost all WACC parameters are based on benchmark assumptions, and because gas service providers engage in the NER process. However under the NGR it remains open for gas service providers to accept some outcomes of the WACC review process but cherry pick others which they consider unfavourable for them without adequate consideration of the resulting overall rate of return. For example:

- certain arguments on the market risk premium (MRP) are repetitive and mostly concern matters the AER has previously considered rather than developments in theory or empirical analysis[9]
- again with respect to the MRP, service providers continue to cite a variety of events including earthquakes in Japan and New Zealand[10] as well as selected reports from market commentators which convey a pessimistic outlook for the global economy,[11] without any substantiation on how this relates to the long run MRP[12]
- consideration of access arrangement proposals has also resulted in repetitious arguments about models aside from CAPM as being ‘well accepted’. Determining ‘acceptance’ of a new theoretical model is a subjective exercise. The use of theoretical financial models to estimate the cost of equity are likely to take

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9 For example Officer and Bishop’s implied volatility and ‘glide path’ approach was first presented during the AER’s WACC review and not relied on given the lack of supporting information provided to the AER at the time. It has since been presented to the AER (and rejected as a basis for estimating the MRP) in electricity distribution determination processes for ETSA Utilities and the Victorian DNSPs, as well as in the AER’s gas access arrangement processes for QLD, SA and NT.

10 For example, APT Allgas Energy Pty Limited, *Access Arrangement Response to AER draft decision 01 July 2011 – 30 June 2016*, p. 18.

11 For example, Jemena Electricity Networks (Vic) Ltd, *Regulatory Proposal 2011-15*, November 2009, pp. 167–8.

12 The AER’s recent decision to set a MRP value of 6 per cent has now been subject to a review application by Envestra under the NGR. While this framework does not include a persuasive evidence test, as the MRP is a market wide parameter the arguments presented to the AER have been identical for gas and electricity networks in the wake of the 2009 WACC review. For this reason the outcomes of this review under the NGR are likely to have a significant bearing on the AER’s decisions under the NER.

significant time to be adopted in practice and does not warrant reconsideration at every access arrangement review.

In developing the NGR (and chapter 6 of the NER), the MCE considered that uncertainty in parameters should be supported by a higher threshold for considering evidence in the form of 'inertia' in departing from previously adopted parameters. However, the presence of the WACC review in the NER and the application of any form of inertia principle in the gas context produce a risk of higher than efficient rates of return when viewed in combination with other features of the decision making framework:

- under the propose-respond nature of access arrangement proposals, the AER is drawn into arguments posed by businesses on specific WACC review outcomes they do not agree with, rather than considering changes in other parameters that may not be in the gas service providers' favour
- gas service providers have multiple opportunities to argue for parameters of their choice, as they actively participate in the WACC review, provide submissions on other determination processes[13] and then argue again in their own determination processes.
- given the technical and ongoing nature of arguments, consumers and other stakeholders may find it difficult to debate WACC issues at every access arrangement review.

Stakeholder engagement is better achieved where all parameters are open for debate in a single focused consultation process, where all affected parties are incentivised to participate and devote resources.

2.3 Proposed rules

The proposed rule change is to amend the NGR to mirror the provisions with respect to the development, publication and application of the outcomes of the WACC review as proposed by the AER in its NER rule change proposal regarding the economic regulation of network businesses.[14] These reviews will be undertaken outside of reviews of access arrangements. Under the rule change proposal, the rates of return that service providers propose in access arrangement proposals would need to be consistent with the most recent 'statement on the cost of capital' published at the end of each WACC review. This is proposed as a new rule 87A. Provisions relating to the timeframes for consultation and publication of the statement on the cost of capital would also mirror those in the NER, as proposed to be amended by the AER.

[13] See for example, SP AusNet and Multinet submissions on Envestra and APT Allgas access arrangement decisions.

[14] See AER, *Rule change proposal: Economic regulation of network businesses: AER's proposed changes to the National Electricity Rules*, September 2011, section 7.

Table 1 Summary of proposed rule change: the cost of capital, review and the statement on the cost of capital

No.	Current rule(s)	Proposed rule(s)	Remarks
[9.1]	87(1) 87(2)(a)(i) 87(2)(a)(ii) 87(2)(b)	87(1)(a) 87(1)(b)	Revisions to: – prescribe the form of the weighted average cost of capital; and – require the cost of capital to be determined in accordance with the statement on the cost of capital.
[9.2]	–	87A	New rule 87A to: – provide for the AER to undertake a review of the rate of return and publish a statement on the cost of capital; and – provide a timeframe for undertaking the review consistent with the timeframe specified in proposed clauses 6.5.2(a) and 6A.6.2(a) of the NER.

Note: the complete set of proposed rule changes are set out in Appendix A.

2.4 How the proposed rules address the identified issues

The AER agrees with the AEMC's reasoning, when developing chapter 6A, that prescribing WACC review outcomes for transmission determinations reduces administrative costs and increases investment certainty. The AER's proposed rule changes seek to achieve the same objectives for gas service providers.

The proposed rule changes would avoid investment distortions across different networks by applying the same benchmark WACC parameters in each regulatory price determination for which the statement on the cost of capital applies.

In administrative terms, moving considerations of WACC matters from the regulatory determination process into a separate periodic review provides further benefits by allowing parties to focus their attention on other elements of the determination process.

3 Nominal post tax WACC

3.1 Current rules

The current arrangements under the NGR and NER in relation to the determination of the rate of return differ. These differences include a broad discretion for the regulator in setting the rate of return under the NGR, contrasting with a highly prescriptive approach under the NER.

In respect of a gas access arrangement, r 76 of the NGR states that total revenue is to be determined for each regulatory year of the access arrangement period using the building block approach. A component of the building block is the return on the projected capital base for each year.[15] Rule 87 of the NGR sets out the provisions pertaining to the determination of the rate of return.

Under r 87, when submitting an access arrangement proposal to the AER, a gas service provider must provide estimates of the proposed rate of return and the various parameters that comprise it. The NGR do not require the use of any particular approach to determining the rate of return. In contrast, the NER require that the rate of return for electricity network service providers (NSPs) be calculated as a nominal post tax WACC.[16]

3.2 Nature and scope of issues with current rules

While the NER mandate a nominal post tax framework for determining the rate of return, the NGR does not specify a particular framework. In its gas decisions to date, the AER has consistently applied a nominal post tax framework. An alternative real pre tax framework was recently proposed to the AER by Jemena Gas Networks in its access arrangement proposal, but was not accepted by the AER due to complexities and potential overcompensation resulting from the pre tax framework.[17]

In prescribing a nominal post tax approach in the NER, the AEMC noted that this largely reflected existing practice under the ACCC's/AER's Statement of Regulatory Principles (SRP). The AEMC also commented that:

- the post tax approach addresses concerns regarding overcompensation for tax in the early years of an asset's life, due to accelerated depreciation provisions for tax purposes which continue to apply to some TNSP assets

- convergence in modelling approaches across different energy businesses would improve the ability to compare returns among different regimes, and that allowing differences across electricity TNSPs would not aid in such a convergence.[18]

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15 NGR, r 76(a).

16 NER, cll 6A.6.2 and 6.5.2(b).

17 AER, *Draft Decision, Jemena Access arrangement proposal for the NSW gas networks 1 July 2010 – 30 June 2015*, June 2010, pp. 145–149.

18 AEMC, *Draft national electricity amendment (Economic regulation of transmission services) rule 2006—Transmission revenue: rule proposal report*, February 2006, pp. 63–64.

In the case of electricity distribution, differences in approaches were evident at the time the MCE developed chapter 6 of the NER. However, the nominal post tax approach was ultimately adopted.

In developing the NGR, the MCE originally intended to prescribe a post tax framework.[19] However, the MCE removed this prescription in response to stakeholder comments that some businesses were on a pre tax framework.[20] The AER's joint submission with the Economic Regulation Authority of Western Australia (ERA) (the economic regulator of gas pipelines in Western Australia) to the MCE on this matter supported the NGR not prescribing a pre or post tax approach, although the submission did not comment on the merits of either.[21]

The use of a pre tax or post tax approach will produce equivalent outcomes provided that the effective company tax rate is accurately calculated under the pre tax framework. Generally, where a pre tax approach has been adopted, regulators have adopted either the statutory tax rate or a simple and conservatively high assumption for the effective tax rate. For example, the ERA has accepted real pre tax frameworks in relation to gas pipelines regulated under the NGR in Western Australia, applying an effective tax rate of 30 per cent (the equivalent of the company tax rate), largely on the basis of consistency with how it regulates other utilities and to simplify modelling.[22]

Both the use of the company tax rate and a conservatively high assumption of the effective tax rate lead to systematic overcompensation for company tax. Addressing this risk of overcompensation requires some administrative costs in calculating an accurate effective tax rate. However, this firstly requires the modelling of cash flows in post tax terms, and then converting this outcome into its pre tax equivalent. That is, the regulator would be performing a post tax calculation in either case.

With respect to the use of a real or nominal framework, either should result in the same rate of return for regulated businesses. While regulators have adopted both approaches, the AER has consistently applied a nominal approach in its determinations primarily because it better enables comparison with data reported in financial markets.[23]

The AER considers that prescribing a nominal post tax approach would streamline the access arrangement review process and provide certainty for stakeholders. Furthermore, there are unlikely to be any changes in circumstances of the service provider or in regulatory practice that would justify having the flexibility in the NGR to reconsider these issues in each access arrangement.

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19 MCE, *Energy Market Reform Bulletin No.74 - 2006 Legislative Package: Initial National Gas Rules*, November 2006.

20 MCE SCO, *Response to Issues Raised in Submissions on the National Gas Rules*, 14 May 2007, p. 10.

21 AER/ERA, *Submission on Draft National Gas Rules*, December 2006, p. 2.

22 See ERA, *Draft Decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline*, March 2011, p. 172. Also reflected in ERA's decisions for Goldfields Gas Pipeline and Mid-West and South-West Gas Distribution Systems.

23 See ACCC, *Draft Statement of Principles for the Regulation of Transmission Revenues*, 27 May 1999, pp. 23–24.

Although the prospect of gas service providers proposing alternatives to a nominal post tax approach in the future appears to be unlikely, the possibility of this occurring introduces potential administrative costs in assessing such alternatives in future access arrangement proposals.

3.3 Proposed rules

The proposed rule change is to replace r 87 of the NGR with provisions that mirror those proposed by the AER in its NER rule change proposal regarding the economic regulation of network businesses.[24] The proposed rule change is to amend the r 87 of the NGR to require the rate of return to be calculated as a nominal vanilla WACC, in line with the NER.

A consequence of the NGR prescribing a post tax nominal WACC framework (as well as the CAPM, see section 4) would be to also introduce its constituent parameters, which would be the subject of determination during periodic WACC reviews (similar to current provisions in the NER). Under a post tax approach the NGR would also need to outline the calculation of a corporate income tax building block.

Table 2 Summary of proposed rule change: the cost of capital, prescribing a nominal post-tax WACC

No.	Current rule(s)	Proposed rule(s)	Remarks
[9.1]	87(1) 87(2)(a)(i) 87(2)(a)(ii) 87(2)(b)	87(1)(a) 87(1)(b)	Revisions to: – prescribe the form of the WACC; and – require the cost of capital to be determined in accordance with the statement on the cost of capital.
[9.3]	–	87B	New rule 87B to provide for the estimated cost of corporate income tax to be a building block and to be calculated for a service provider.

Note: the complete set of proposed rule changes are set out in Appendix A.

Draft rules prepared by the AER are set out in Appendix A.

3.4 How the proposed rules address the identified issues

The prescription of a post tax nominal approach in the NGR would reduce:

- potential inefficient overcompensation of service providers for benchmark tax liabilities under a pre tax framework

[24] See AER, *Rule change proposal: Economic regulation of network businesses: AER's proposed changes to the National Electricity Rules*, September 2011, section 7.

- administrative costs associated with consideration of alternative models in gas access arrangement proposals, and maintenance of pre and post tax revenue models.

Consideration of any rule changes affecting those access arrangements that include alternative pre tax/ real approaches should be taken into account. However, in the past the AER has dealt with the transition of electricity networks and gas pipelines from a pre tax to a post tax approach, and considers the once-off transitional costs are more than offset by potential savings in administrative costs and by ensuring a more accurate compensation for tax liabilities.

As noted by the AEMC, there also appear to be benefits to stakeholders of aligning the calculation of the rate of return for the purposes of comparison across energy businesses.

4 Prescription of the CAPM

4.1 Current Rules

The CAPM is a financial model used to determine the return on equity, as a component of the return on capital. Currently:

- the use of the CAPM to determine return on equity is prescribed in the NER[25]
- the NGR requires that the rate of return be determined using a 'well accepted financial model' of which the CAPM is only identified as an example.[26]

4.2 Nature and scope of issues with current rules

The CAPM is a well accepted financial model and has been applied by the AER and the ERA in all of their gas determinations to date. However the robustness and appropriateness of the CAPM and alternative models have been debated at length in recent gas determination processes with commensurate administrative burden.[27]

In general, finance theory and methods are slow to develop. Also, the choice of the regulator to depart from reliance on the CAPM would be a significant change in approach having impacts beyond the energy sector and potentially affecting investment certainty. This is reflected in the current drafting of the NGR that requires the use of a 'well accepted model' and refers to the CAPM.

It appears unlikely that there would be a justifiable departure from the CAPM over the medium to long term. Any such departure would have significant implications for both the gas and electricity sectors.

4.3 Proposed rules

The AER proposes to apply a consistent and streamlined approach to determining the rate of return across all electricity networks and gas pipelines. As part of this, the AER proposes that the NGR require that the cost of equity be calculated using the CAPM (similar to the current provisions in the NER).

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25 NER, cll 6.5.2 and 6A.6.2.

26 NGR, r 87(2)(b).

27 See for example; AER, *Final decision on Jemena Gas Networks*, June 2010, pp. 100–121; AER, *Final decision on Envestra (SA)*, June 2011, pp. 164–175; ERA, *Draft Decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline*, May 2011, p. 111–118; ERA, *Final decision on WA Gas Networks Pty Ltd*, February 2011, pp. 95–102.

Table 3 Summary of proposed rule change: the cost of capital, prescribing the CAPM

No.	Current rule(s)	Proposed rule(s)	Remarks
[9.1]	87(1)	87(1)(a)	Revisions to prescribe the form of the WACC, including use of the CAPM.

Note: the complete set of proposed rule changes are set out in Appendix A.

4.4 How the proposed rules address the identified issues

A consequence of prescribing the CAPM in the NGR (and consequential amendments to other WACC provisions) would be to introduce investment certainty on fundamental aspects of the rate of return approach to be adopted by the AER in each gas access arrangement review. Furthermore, there would be a reduction in administrative burden at each review for stakeholders and the AER in having to consider alternative approaches to setting the cost of equity without any likely departures from the status quo, where regulators have previously determined the use of the CAPM.

Given the significance of this proposal for the gas sector, another feasible alternative is for the NER and NGR WACC reviews to consider the use of the CAPM and alternatives, and prescribe the approach to setting the cost of equity for fixed periods of time. While this would have the advantage of restricting repetitious arguments in gas decisions, this would require significant changes to the NER (namely removal of all definition around setting the cost of equity, and potentially the cost of debt).

5 How the proposed rules contribute to the NGO and revenue and pricing principles

Alignment of the WACC review provisions across the NER and NGR would:

- strengthen the AER's ability to approve a rate of return that is commensurate with the regulatory and commercial risks faced by service providers, rather than a rate of return that is subject to cherry picking of individual parameters and is higher than an efficient level
- minimise the administrative cost for regulated businesses, consumers and the regulator associated with regulatory decision making by focusing on a single periodic review of the WACC, as opposed to the current continual review of arguments
- improve incentives on network businesses to invest efficiently in their networks by providing certainty on how the rate of return is to be determined for the life of the WACC review decision
- ensure regulated businesses are provided with allowances for corporate income tax which better reflect efficient costs.

6 Expected costs and benefits and the potential impact on those affected

The proposed rule changes seek to enable the AER to streamline its processes for determining the cost of capital across all energy NSPs by aligning provisions relating to the WACC review, prescription of the post tax nominal framework and the CAPM.

The proposed rule changes have the following benefits:

- provide more certainty and stability in how the rate of return is to be determined, in turn encouraging an environment in which service providers are able to attract more investment

- strengthen the AER's ability to approve an overall rate of return commensurate with the regulatory and commercial risks faced by service providers, rather than a rate of return that is subject to cherry picking of individual parameters and is higher than an efficient level

- reduce the administrative cost for regulated businesses, consumers and the regulator associated with regulatory decision making by focusing on a single periodic review of the WACC, as opposed to the current continual review of arguments in price determination processes

- provide a greater balance between the need for flexibility in the cost of capital framework over the longer term with greater certainty and consistency in the short to medium term.

The proposed rule changes have the following costs:

- loss of flexibility in dealing with changes in market conditions and theoretical developments in the short term when setting rates of return for gas service providers

- loss of flexibility in considering alternative WACC frameworks and methods in setting the cost of equity

- a potential increase in administrative costs for gas businesses, who may invest more effort in the AER's WACC reviews.

In terms of other consequences, increased codification and consistency in how the rate of return is determined for energy service providers may affect approaches adopted by the ACCC and other regulators. Such consistency may also aid investors and other external parties in understanding the AER's methods.

In proposing changes to the NGR the AER is mindful of the application of these rules in Western Australia where the ERA is the relevant regulator. The AER considers that the major amendments proposed in terms of requiring a periodic WACC review and prescription of the CAPM/ post tax nominal approach under the NGR may not be justified for the ERA given the savings in administrative costs are unlikely to be as large as those for the AER. In particular, the AER's proposal seeks to reduce administrative costs in setting the WACC for the 40 gas and electricity network businesses it regulates. By contrast, imposing a WACC review and other provisions on the ERA for its gas businesses (noting that the ERA is not subjected to the NER or WACC reviews in the electricity context) would not be justified for the four gas pipelines it regulates, also noting that access arrangement reviews for these pipelines tend to be concurrent.

Appendix A Draft rules

Proposed rule change: cost of capital

No.	Current rule(s)	Proposed rule(s)	Remarks
[9.1]	87(1) 87(2)(a)(i) 87(2)(a)(ii) 87(2)(b)	87(1)(a) 87(1)(b)	Revisions to: – prescribe the form of the WACC, including the capm; and – require the cost of capital to be determined in accordance with the statement on the cost of capital.
[9.1.1]	69 72(1)(g)	69 72(1)(g)	Consequential revisions.
[9.2]	–	87A(1) 87A(2) 87A(3) 87A(4)(a) 87A(4)(b) 87A(4)(c) 87A(4)(d) 87A(4)(e) 87A(4)(f) 87A(5)(a) 87A(5)(b) 87A(5)(c) 87A(5)(d) 87A(5)(e) 87A(6) 87A(7) 87A(8)(a)(i) 87A(8)(a)(ii) 87A(8)(a)(iii) 87A(8)(b) 87A(8)(c) 87A(8)(d)(i) 87A(8)(d)(ii) 87A(8)(e)(i) 87A(8)(e)(ii)	New rule 87A to – provide for the AER to undertake a review of the rate of return and publish a statement on the cost of capital; and – provide a timeframe for undertaking the review consistent with the timeframe specified in proposed clauses 6.5.2(a) and 6A.6.2(a) of the NER.
[9.3]	–	(Division 5B) 87B(1)(a) 87B(1)(b) 87B(2)(a) 87B(2)(b)	New rule 87B to provide for the estimated cost of corporate income tax to be a building block and to be calculated for a service provider.
[9.3.1]	72(h) 76(c)	72(h) 76(c)	Consequential revisions.

Part 9 Price and revenue regulation

Division 1 Preliminary

69 Interpretation

In this Part:

capital base, in relation to a pipeline, means the capital value to be attributed, in accordance with this Part, to pipeline assets.

capital expenditure means costs and expenditure of a capital nature incurred to provide, or in providing, pipeline services.

conforming capital expenditure means capital expenditure that complies with the new capital expenditure criteria.

depreciation means depreciation of the capital base.

new capital expenditure criteria mean the criteria stated in rule 79.

non-conforming capital expenditure means capital expenditure that does not comply with the new capital expenditure criteria.

operating expenditure means operating, maintenance and other costs and expenditure of a non-capital nature incurred in providing pipeline services and includes expenditure incurred in increasing long-term demand for pipeline services and otherwise developing the market for pipeline services.

pipeline assets, in relation to a pipeline, means capital assets that constitute the pipeline or are otherwise used by the service provider to provide services.

statement on the cost of capital means the statement published by the AER under rule 87A(3). [9.1.1]

tariff class means customers for one or more reference services who constitute a tariff class under a full access arrangement.

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Division 2 Access arrangement information relevant to price and revenue regulation

72 Specific requirements for access arrangement information relevant to price and revenue regulation

(1) The *access arrangement information* for a *full access arrangement proposal* (other than an *access arrangement variation proposal*) must include the following:

(a) if the *access arrangement period* commences at the end of an earlier *access arrangement period*:

(i) capital expenditure (by asset class) over the earlier *access arrangement period*; and

(ii) operating expenditure (by category) over the earlier *access arrangement period*; and

(iii) usage of the pipeline over the earlier *access arrangement period* showing:

(A) for a distribution pipeline, minimum, maximum and average demand and, for a transmission pipeline, minimum, maximum and average demand for each *receipt or delivery point*; and

(B) for a distribution pipeline, customer numbers in total and by tariff class and, for a transmission pipeline, user numbers for each *receipt or delivery point*;

(b) how the capital base is arrived at and, if the *access arrangement period* commences at the end of an earlier *access arrangement period*, a demonstration of how the capital base increased or diminished over the previous *access arrangement period*;

(c) the projected capital base over the *access arrangement period*, including:

(i) a forecast of conforming capital expenditure for the period and the basis for the forecast; and

(ii) a forecast of depreciation for the period including a demonstration of how the forecast is derived on the basis of the proposed depreciation method;

(d) to the extent it is practicable to forecast pipeline capacity and utilisation of pipeline capacity over the *access arrangement period*, a forecast of pipeline capacity and utilisation of pipeline capacity over that period and the basis on which the forecast has been derived;

(e) a forecast of operating expenditure over the *access arrangement period* and the basis on which the forecast has been derived;

(f) the key performance indicators to be used by the service provider to support expenditure to be incurred over the *access arrangement period*;

(g) the proposed rate of return~~, the assumptions on which the rate of return is calculated and a demonstration of how it is calculated~~ calculated in accordance with rule 87; **[9.1.1]**

(h) ~~the proposed method for dealing with taxation, and a demonstration of how the allowance for taxation is calculated~~the estimated cost of corporate income tax calculated in accordance with rule 87A; **[9.3.1]**

(i) if an incentive mechanism operated for the previous *access arrangement period*—the proposed carry-over of increments for efficiency gains or decrements for efficiency losses in the previous *access arrangement period* and a demonstration of how allowance is to be made for any such increments or decrements;

(j) the proposed approach to the setting of tariffs including:

(i) the suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs; and

(ii) a description of any pricing principles employed but not otherwise disclosed under this rule;

(k) the service provider's rationale for any proposed *reference tariff variation mechanism*;

(l) the service provider's rationale for any proposed incentive mechanism;

(m) the total revenue to be derived from pipeline services for each regulatory year of the *access arrangement period*.

(2) The *access arrangement information* for an *access arrangement variation proposal* related to a full access arrangement must include so much of the above information as is relevant to the proposal.

...

Division 3 Building block approach

76 Total revenue

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

(a) a return on the projected capital base for the year (See Divisions 4 and 5); and

(b) depreciation on the projected capital base for the year (See Division 6); and

(c) ~~if applicable —~~the estimated cost of corporate income tax for the year (See Division 5A); and **[9.3.1]**

(d) increments or decrements for the year resulting from the operation of an incentive mechanism to encourage gains in efficiency (See Division 9); and

(e) a forecast of operating expenditure for the year (See Division 7).

...

Division 5 Rate of return

87 Rate of return

~~(1) The rate of return on capital is to be commensurate with prevailing conditions in the market for funds and the risks involved in providing reference services.~~ **[9.1]**

(1) The rate of return for a service provider for an access arrangement period is the cost of capital as measured by the return required by investors in a commercial enterprise with a similar nature and degree of non-diversifiable risk as that faced by the service provider and must be calculated: **[9.1]**

(a) as a nominal vanilla weighted average cost of capital (WACC) in accordance with the following formula: **[9.1]**

$$WACC = k_e \frac{E}{V} + k_d \frac{D}{V}$$ **[9.1]**

where: **[9.1]**

k_e is the return on equity (determined using the Capital Asset Pricing Model) and is calculated as: **[9.1]**

$r_f + \beta_e \times MRP$ **[9.1]**

where: **[9.1]**

r_f is the nominal risk free rate for the access arrangement period; **[9.1]**

β_e is the equity beta; and **[9.1]**

MRP is the market risk premium; **[9.1]**

k_d is the return on debt and is calculated as: **[9.1]**

r_f + DRP **[9.1]**

where: **[9.1]**

DRP is the debt risk premium for the access arrangement period; **[9.1]**

E/V is the market value of equity as a proportion of the market value of equity and debt, which is 1 – D/V; and **[9.1]**

D/V is the market value of debt as a proportion of the market value of equity and debt; and **[9.1]**

(b) in accordance with the statement on the cost of capital. **[9.1]**

~~(2) In determining a rate of return on capital:~~ **[9.1]**

~~(a) it will be assumed that the service provider:~~ **[9.1]**

~~(i) meets benchmark levels of efficiency; and~~ **[9.1]**

~~(ii) uses a financing structure that meets benchmark standards as to gearing and other financial parameters for a going concern and reflects in other respects best practice; and~~ **[9.1]**

~~(b) a well accepted approach that incorporates the cost of equity and debt, such as the Weighted Average Cost of Capital, is to be used; and a well accepted financial model, such as the Capital Asset Pricing Model, is to be used.~~ **[9.1]**

87A Review of the rate of return **[9.2]**

(1) The AER must, in accordance with paragraph (8), carry out reviews of the matters referred to in paragraph (4). **[9.2]**

(2) A first review is to be concluded by 1 March 2014 and further reviews are to follow at intervals not exceeding, in any case, five years with the first interval starting from 1 March 2014. **[9.2]**

(3) The AER must, in consequence of a review, issue a statement (a statement on the cost of capital) adopting values and methods for service providers or for specified classes of service providers. **[9.2]**

(4) The following matters referred to in rule 87(1)(a) and 87B (and the method of their calculation) may form the subject of a review: **[9.2]**

(a) the nominal risk free rate; **[9.2]**

(b) the equity beta; **[9.2]**

(c) the market risk premium; **[9.2]**

(d) the debt risk premium; **[9.2]**

(e) the ratio of the value of debt to the value of equity; and **[9.2]**

(f) the assumed utilisation of imputation credits. **[9.2]**

(5) In undertaking a review, the AER must have regard to: **[9.2]**

(a) the need for the overall rate of return calculated for the purposes of rule 87(1)(a) to be a forward looking rate of return that is commensurate with prevailing conditions in the market for funds and the risk involved in providing pipeline services; **[9.2]**

(b) the need for the return on debt to reflect the current cost of borrowings for comparable debt; **[9.2]**

(c) the need for the values attributable to, or the methods of calculating, the matters referred to in paragraph (4) that vary according to the efficiency of the service provider to be based on a benchmark efficient service provider; [9.2]

(d) the need to achieve an outcome that is consistent with the national gas objective; and [9.2]

(e) the previously adopted values for or methods of calculating the matters referred to in paragraph (4). [9.2]

(6) A statement on the cost of capital applies only for the purposes of an *access arrangement proposal* submitted to the AER after publication of the statement on the cost of capital. [9.2]

(7) An access arrangement to which a statement on the cost of capital is applicable must be consistent with the statement. [9.2]

(8) In carrying out a review under this rule: [9.2]

(a) the AER must publish: [9.2]

(i) the proposed values or methods of calculating the matters referred to in paragraph (4); [9.2]

(ii) an explanatory statement that sets out the reasons for the proposed values or methods of calculating the matters referred to in paragraph (4); and [9.2]

(iii) an invitation for written submissions on the for the proposed values or methods of calculating the matters referred to in paragraph (4). [9.2]

(b) The invitation must allow no less than 30 business days for the making of submissions, and the AER is not required to consider any submission made pursuant to that invitation after this time period has expired. [9.2]

(c) The AER may publish such issues, consultation and discussion papers, and hold such conferences and information sessions, in relation to the proposed values or methods of calculating the matters referred to in paragraph (4) as it considers appropriate. [9.2]

(d) Within 100 business days of publishing the documents referred to in paragraph (a), the AER must publish, in relation to the values or matters of calculating the matters referred to in paragraph (4): [9.2]

(i) its final decision including its reasons; and [9.2]

(ii) notice of the making of the final decision. [9.2]

(e) Subject to paragraph (b), the AER must, in making its final decision referred to in subparagraph (d)(i), consider any submissions made pursuant to the invitation for submissions referred to in subparagraph (a)(iii), and the reasons referred to in subparagraph (d)(i) must include: [9.2]

(i) a summary of each issues raised in those submissions that the AER reasonably considers to be material; and [9.2]

(ii) the AER's response to each such issue. [9.2]

Division 5A Estimated cost of corporate income tax [9.3]

87B Estimated cost of corporate income tax [9.3]

(1) The estimated cost of corporate income tax of a service provider for each year (**ETCt**) must be calculated: [9.3]

(a) in accordance with the following formula: [9.3]

$ETC_t = (ETI_t \times r_t)(1 - \gamma)$ [9.3]

where: [9.3]

ETI_t is an estimate of the taxable income for that year that would be earned by a benchmark service provider a result of the provision of reference services; [9.3]

r_t is the expected statutory income tax rate for that year as determined by the AER; and [9.3]

γ is the assumed utilisation of imputation credits; [9.3]

(b) in accordance with the statement on the cost of capital. [9.3]

(2) For these purposes: [9.3]

(a) the cost of debt must be based on that of a benchmark efficient service provider; and [9.3]

(b) the estimate must take into account the estimated depreciation for that year for tax purposes, for a benchmark efficient service provider, of assets where the value of those assets is included in the capital base for that year. [9.3]

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