



John Pierce
Chair
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Thursday, 29 March 2018

Dear Mr Pierce

Re: Review into the scope of economic regulation applied to covered pipelines

Thank you for this opportunity to comment on the AEMC's draft report. APA is Australia's leading energy infrastructure business. Our 15,000 kilometres of natural gas pipelines connect sources of supply and markets across mainland Australia. We operate and maintain networks connecting 1.3 million Australian homes and businesses to the benefits of natural gas. In addition we own or have interests in gas storage facilities, gas-fired power stations and wind farms. All up, we own and/or manage and operate a portfolio of energy assets in excess of \$20 billion.

APA support aspects of the AEMC's draft report but we have significant reservations with some of the proposals contained in the draft report. APA's major concerns relate to:

1. The changes to the definition of depreciation;
2. Reconsidering coverage; and
3. Inclusion of currently unregulated assets into existing access arrangements.

1 Definition of Depreciation

The AEMC propose changes to the National Gas Rules that underpin the introduction of the recovered capital methodology of asset valuation. APA has significant concerns about the recovered capital methodology as a means of valuing pipelines.

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The recovered capital methodology, as a means of setting a capital base for an existing pipeline, is one that seeks to remove from today's asset value:

- any historical efficiencies that the pipeline service provider achieved (including efficiencies that it would have been able to retain had it actually been regulated); and
- any benefits to the pipeline service provider due to the service provider charging a higher price than would have been allowed had the pipeline been regulated historically.

The effect of the first point is to remove from the service provider any incentive to make efforts to grow a market or reduce costs as these are used to reduce the value of the asset going forward (they do not accrue, in any part, to the service provider). The result is higher pipeline tariffs going forward as incentives to reduce and manage construction and operating costs are removed. This is not in the long-term interests of consumers.

The effect of the second point is more pervasive. In effect, the regulator is forming a retrospective view as to the appropriate rate of the return for a pipeline and applying that rate of return now, as if it applied in the past. Ex-post risk assessment is highly likely to only recognise risks that eventuated, not all the risks that were possible at the time of the investment, and is likely to underestimate investment risk.

This appropriation has the effect of retrospectively confiscating already distributed (and lawfully gained) returns from existing shareholders. This is a clear instance of sovereign risk. The impact of this approach is likely to be reduced investment, higher prices on new pipelines and a threat to all infrastructure sectors that a similar approach could be adopted more broadly. The potential impacts on the Australian economy are far-reaching and related to ports, rail, airports, and water, as some examples.

It is not forward looking and it is not consistent with competitive market outcomes.

The introduction of an ex post seizure of value by introducing the recovered capital methodology for pipelines that have already been constructed represents a realisation of Sovereign Risk. The recovered capital methodology poses a risk to efficient investment in pipelines going forward. All pipelines when making investment decisions will have to address the possibility that at some point in the future, possibly decades away, the regulator may be required to establish the capital base. While it is unclear what rate of return a regulator will use, the possibility must be considered that they are likely to use rates of return similar to the regulated rate of return.

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This in turn means that pipeline service providers will only invest in those pipelines where the risk is low enough that the regulated rate of return is sufficient. If the recovered capital methodology was introduced it means pipelines with a risk profile higher than supported by the regulated rate of return (which would have currently been built) are unlikely to be built in the future.

Because of these issues, enabling the use of the recovered capital methodology of asset valuation will lead to price increases on new pipelines and directly conflicts with outcomes consistent with the National Gas Objective.

APA has provided a report from HoustonKemp outlining the retrospective nature of the recovered capital methodology and its negative impact on future investment.

APA requests the AEMC distance itself from the use of the recovered capital methodology and require that the regulator demonstrate how the depreciation methodology is consistent with the National Gas Objective.

2 Reconsidering Coverage

APA is also concerned about the AEMC reopening the form of coverage so shortly after the matter has been considered as part of the Vertigan Review. It is not included in the Terms of Reference from the COAG Energy Council and the uncertainty introduced by this work has significant impacts on investment. The Vertigan review has resolved that no changes to coverage are necessary. APA requests the AEMC not reopen this issue so soon after the Vertigan Review has so recently considered it.

3 Inclusion of currently unregulated assets into existing access arrangements

APA is concerned by the AEMC's recommendation to override the existing legislated coverage test to deem certain assets that are currently uncovered to be made part of a covered asset.

Past decisions not to cover certain expansions and extensions have been made by regulators in accordance with binding extension and expansion policies in access arrangements. These extensions and expansion policies have been reviewed, amended and approved by those regulators, and the decisions made under them made with due consideration, and in many cases, consultation. These decisions should not be overturned without proper consideration of the coverage criteria. To do so would undermine the

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existing coverage regime, and signal a risk to other regulated infrastructure sectors that tests for economic regulation such as the declaration criteria can be overwritten by governments without due process or consideration of the circumstances of economic regulation.

Further, the circumstances surrounding whether the expansion of a covered pipeline should be itself covered needs to be the result of a comprehensive consideration of the market circumstances of the expansion. It is inappropriate to remove that discretion based on an assumption that the expansion will have the same market power as the covered pipeline.

Attached is a more detailed explanation of our concerns, and comments addressing the other recommendations the AEMC is making.

If you have any questions please contact Mark Allen on (02) 9275 0010.

Faithfully

A handwritten signature in blue ink, appearing to read 'Ross Gersbach', is centered on the page.

Ross Gersbach

Chief Executive Strategy & Development
APA

1 Regulatory Framework

1.1 Negotiate Arbitrate Framework

APA supports the Commission's decision to retain the negotiate/arbitrate framework in the National Gas Rules (NGR). The negotiate/arbitrate framework suits regulation of gas pipelines for the reasons outlined in the AEMC's draft report.

1.2 Light Regulation

APA supports the Commission's decision to retain light regulation for gas pipelines.

In relation to concerns about the costs imposed by there being multiple forms of regulation, APA notes that the costs from different forms of regulation, as opposed to the regulation itself, are not likely to be great because there are only three forms, including prescriptive arbitration (National Gas Rules Part 23).

1.3 Consideration of Coverage

There has been a consideration of the coverage criteria undertaken by Dr Vertigan at the request of COAG Energy Council. The COAG Energy Council did not include coverage in the terms of reference for the AEMC. Good practice would suggest that the COAG Energy Council does not want resources diverted to reconsider the issue such a short time after the finalisation of the Vertigan Report.

The AEMC's draft report's discussion on the form of coverage criteria introduces a significant level of uncertainty for the entire industry. These are significant changes, some of which carry the risk of significant detriment to pipeline service providers, particularly in regard to the regulation of light covered pipelines.

The draft report has, unnecessarily, made it unclear as to which pipelines could find themselves subject to light regulation. In doing so the AEMC has created an environment where prudent pipeline service providers will have no choice but to operate on the basis that any future investment will be subject to provisions that act retrospectively and are detrimental to investment. This means only those investments that represent a very low risk will proceed. This in turn means that projects that, in the past, would have proceeded may not do so due to this uncertainty created around coverage.

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In introducing this risk, the AEMC is undermining one of the strengths that the pipeline industry has demonstrated in the past decade through investment taking place where investment is needed. The ACCC recognise this strength in their East Coast Gas Inquiry.¹

1.3.1 **Recommended Approach**

The AEMC should not continue with any consideration of coverage or forms of coverage due to the harm being done by uncertainty and the proximity to other reviews making it unnecessary.

1.4 **Expansions and Extensions**

APA has two concerns in respect of the AEMC's draft recommendations on extensions and expansions:

1. Bypassing the coverage test to deem certain currently uncovered assets to be covered undermines the legislative framework for coverage. The AEMC has given no consideration to the market circumstances of these assets; the impacts on regulatory certainty; or the sovereign risk such a decision would create in the energy and other infrastructure sectors; and
2. Removing regulator discretion in respect of coverage of extensions and expansions is contrary to other recommendations made by the AEMC that seek to expand rather than constrain regulatory discretion.

1.4.1 **AEMC bypassing the coverage test**

APA is concerned by the AEMC's decision to bypass the coverage test contained in the National Gas Law in making the recommendation that a previously unregulated asset become a regulated asset.

Past decisions to cover or not cover certain expansions and extensions have been made by regulators in accordance with binding extension and expansion policies in access arrangements. These extensions and expansion policies have been reviewed, amended and approved by those regulators, and the decisions made under them made with due consideration, and in many cases, public consultation.

Past decisions of the regulator should not be overturned without proper consideration of the coverage criteria. To do so would undermine the existing coverage regime, and signal a risk to other regulated infrastructure

¹ ACCC, East Coast Gas Inquiry, April 2016, p93

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sectors that tests for economic regulation such as the declaration criteria can be overwritten by governments without due process or consideration of the circumstances of economic regulation.

APA notes that the AEMC is satisfied that existing uncovered extensions can be regulated through the successful application of the coverage test. It is unclear why the AEMC has not applied a similar approach to expansions. Currently uncovered expansions are exposed to a successful coverage application and can be rolled into an existing regulated asset base through the consolidation of access arrangements. This approach avoids the risk of arbitrary and unnecessary regulation of assets through legislative fiat, and ensures the continuing integrity of the regulatory scheme, including the non-arbitrary application of regulation, that is an important characteristic of access regulation in this Australia.

1.4.2 Need for consistency across the AEMC's recommendations

*"the Commission has concluded that if a pipeline is covered, then an expansion of that pipeline should be covered to prevent any market power being used to monopoly price the services provided by the expansion."*²

The AEMC make the following statement in relation to expansions:

*"This is due to the expansion facing substantially the same market landscape as the pipeline itself as it will enjoy similar barriers to entry and similar potential competitors."*³

APA notes this is in fact an empirical question, and one that should be explored through an exposition of facts, rather than determined through assertion.

There are a number of characteristics of the gas pipeline market that mean that simplistic economic tools, with their inherent idealised assumptions, are not useful for analysing questions of market power. There is significant work in economics demonstrating that markets with these characteristics still produce desirable outcomes in terms of prices, investment and allocation of resources.

² AEMC, p 55

³ ibid

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As the AEMC has noted that gas pipelines have:

- economies of scale and scope, and
- sunk costs,

To this APA adds there is also amongst other characteristics of pipelines;

- first access to low cost resources,
- demand for pipeline services are derived demand,
- there are multiple parties willing to provide pipeline services,
- there is significant customer power (for example major shippers are able to build and operate their own pipelines),
- long asset lives,
- providers are subject to hold up risk, and
- demand for gas is elastic⁴.

This means the gas pipeline sector in particular, presents significant complexity for economic analysis. It is because of this complexity that APA considers that the question of whether an expansion should be covered should be the result of careful consideration by a regulator of the range of factors that are relevant to that particular expansion. It is not appropriate to make a simple blanket assertion as the basis for this decision.

APA would also be concerned about reliance on the work undertaken by the ACCC or Dr Vertigan to support this approach. APA outlines our concerns with relying on the work of the ACCC or Dr Vertigan in arriving at this position in section 1.5 of this paper.

The AEMC's recommendation in relation to regulator discretion and expansions is different from the policy position on other aspects of regulator discretion. We note in relation to discretion, the AEMC supports the removal of levels of discretion on the basis that:

“as a matter of principle, the regulator should not be prevented from making a decision on an access arrangement proposal that best promotes the NGO, having

⁴ Paul J. Burke* and Hewen Yang, The price and income elasticities of natural gas demand: International evidence: ANU Working Paper No. 2016/14, August 2016.

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regard to all the relevant factors, criteria and principles in the NGL and NGR”⁵

The AEMC’s draft report has not clarified the basis for a different view in relation to discretion and coverage of expansions.

1.4.3 Recommended approach

The best approach to the issue of extensions and expansions would be for the AEMC to seek consistency, such as exists in the current rules, where the decision is left at the discretion of the regulator or subject to the determination of the NCC where the significant work of assessing the competitive nature of the market can be undertaken.

1.5 Analysis underpinning the Draft Report

On multiple occasions the AEMC refers to the work undertaken by the ACCC in their East Coast Gas Inquiry. APA notes that there were significant shortcomings in the work by the ACCC.

1.5.1 ACCC’s East Coast Gas Inquiry

The main findings of the ACCC’s East Coast Gas Inquiry in relation to pipeline pricing are based on misinterpreted evidence or findings that have been inferred from examples presented out of context.

To provide context, the ACCC, under its information gathering powers, had access to all APA documents and communications, and investigated over 300 contracts and variations from APA alone as part of its Inquiry. It also required APA to provide communications (including emails, board papers, notes, reports and so on) between APA senior commercial staff and its executive over a two-year period. The ACCC spent one year looking at the documents provided, interviewing pipeline operators and market participants under oath, and investigating market-pricing outcomes.

Despite this degree of analysis, the ACCC resorted to making claims, inferences and assertions based on marginal expansion projects, minor revenue items (non-firm services), and economically flawed claims in regard to “fully paid off” assets to support a wholesale change to regulation of the pipeline sector.

⁵ AEMC, p95

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The ACCC made no systematic inquiry into markets for pipeline services, or into whether there was monopoly pricing in those markets. Nor did they use tests for monopolies that are consistent with the nature of the market and competition law.

More details on the flaws in the ACCC's analysis are set out in response to the AER's Issues paper "[APA Group submission responding to the ACCC issues paper](#)" and the APA response to the examination of the current test for the regulation of gas pipelines "[APA Submission to Dr Vertigan's Consultation Paper](#)".

1.5.2 **The Vertigan examination of the current test for the regulation of gas pipelines review.**

In response to the ACCC report and the AEMC's East Australian Wholesale Gas Market and Pipelines Framework Review, the COAG Energy Council had Dr Vertigan undertake an examination of the current test for the regulation of gas pipelines review.

Dr Vertigan found there was no requirement to make amendments to the coverage test.

Dr Vertigan identified possible issues with pricing power but caution should be exercised as this was done without undertaking the normal tests for determining market power. Dr Vertigan's findings were anecdotal, not evidential, and did not involve economic analysis or a consideration of the costs and benefits of increasing the scope of regulation. His investigations certainly did not include analysis of elements relevant to coverage that might be undertaken by the NCC.

Critically, Dr Vertigan ignored the advice of the NCC, the body empowered under the National Access Law and National Gas Law to administer the declaration and coverage tests respectively, as to the operation of the coverage test, and the assessment of market power. Importantly, the NCC stated in its submission to the Vertigan Inquiry that:

the NCC considers that the ACCC inquiry report does not adequately consider the question of whether any monopoly pricing of gas pipelines – even if it is accepted that it is or has been occurring – will persist over the long-term. In other words, it is not evident to the NCC that the ACCC's report has fully considered whether any monopoly pricing is a permanent or transitory phenomenon.

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Thirdly, the NCC has reservations regarding the ACCC's approach in that – at particular points in time - analogous reasoning could potentially be applied to many other sectors of the economy. For such sectors, however, the application of access regulation would be clearly unwarranted - the groceries sector can be cited as an example.

Regulatory solutions are not without significant cost, both direct (regulatory burden) and indirect (impacts on investment incentives). It was always the intention of the National Access Regime and National Gas Law that regulation would only be applied where the benefits were substantial and could not be achieved through other interventions or waiting for transitory distortions to dissipate.⁶

It is clear that the ACCC and Vertigan workstreams and conclusions do not provide a sufficient basis on which to assume the problem in the gas pipeline industry is one of under regulation, particularly in light of the introduction of National Gas Rules Part 23.

1.5.3 Recommended approach

The AEMC should be very careful in placing any reliance on the work of the ACCC and GMRG in respect of the operation of the coverage test, and should avoid simplistic theoretical constructions of the market for pipelines that eschew this market of many of its important characteristics.

2 Initial Capital Base

2.1 Requirement to calculate an initial capital base

The AEMC recommends:

“for those light regulation pipelines without an initial capital base determination, the regulator to determine an initial capital base within six calendar months of the commencement of the amendments”⁷

The AEMC suggests that this is worth the cost because:

⁶ National Competition Council 2016, Submission to the Examination of the Coverage Test, 24 November, pp1-2

⁷ AEMC, p110

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- increased certainty for service providers, users and prospective users as to dispute resolution outcomes in relation to tariffs
- the increased certainty improves the likelihood of a negotiated settlement
- if a dispute resolution in relation to tariffs was to eventuate, it would be simpler and quicker given the initial asset base, a key component in the determination of a tariff, has already been determined.

APA notes that the calculation of the initial capital base is unlikely to produce the positive outcomes that the AEMC is seeking. The initial capital base is only one piece of information that sets out what the pipeline must recover in a regulated environment over the remaining duration of its economic life. A single value for an initial capital base could underpin a wide range of regulated tariffs as a result of differences in the timing of recovery of capital (level of depreciation), the nature of services sought, and demand for services on the pipeline.

2.2 Requirement of Arbitrator to use the initial capital base determined by the regulator

APA's view is that this requirement is largely unnecessary given the arbitrator for east coast gas pipelines is the AER who is determining the capital value and therefore is highly unlikely to utilise a different value.

In Western Australia while there is a different arbitrator (WA Energy Disputes Arbitrator), it is unlikely that they would not rely on the work done by the ERA in establishing a capital base.

However, APA's main concern in relation to this recommendation is this is the mechanism by which the deeply flawed recovered capital methodology is translated into tariffs for light covered pipelines.

2.3 The Recovered Capital Methodology

APA has significant concerns with the AEMC's support for the imposition of the recovered capital methodology of asset valuation. This approach has significant shortcomings that are not consistent with the long term interests of consumers, as:

- It represents a seizure of value by the Government (Sovereign Risk);
- It will have a negative impact on future investment;
- it will result in price rises in the future for pipeline services;

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- It is inconsistent with outcomes in competitive markets and the NGO;
- It eliminates efficiency incentives;
- It undermines competitive outcomes;
- Its use discriminates between shippers;
- It is an incentive to delay investment in production; and
- It is not widely used.

The AEMC is proposing to modify the definition of depreciation in rule 77 to refer to economic depreciation. The AEMC state:

“Economic depreciation encompasses a range of approaches including the AER’s interpretation for Part 23 financial reporting purposes.”⁸

The AER’s interpretation for Part 23 financial reporting purposes is the recovered capital methodology. However, there are fundamental flaws in the AEMC’s analysis that considers the recovered capital methodology as possibly being consistent with the National Gas Objective.

The formula for calculating the recovered capital methodology works as follows:

$$\begin{aligned}
 & \text{Value of Capital Base}_t \\
 &= \text{Construction Cost}_0 + \sum_{i=1}^t \text{Capex}_i - \sum_{i=1}^t \text{Return of Capital}_i \\
 &\quad - \sum_{i=1}^t \text{Asset Disposals}_i
 \end{aligned}$$

Where

$$\begin{aligned}
 & \sum_{i=1}^t \text{Return of Capital}_i = \\
 & \sum_{i=1}^t \text{Revenue}_i - \left[\sum_{i=1}^t \text{Opex}_i + \sum_{i=1}^t \text{Return on Capital}_i + \sum_{i=1}^t \text{Net Tax Liabilities}_i \right]^9
 \end{aligned}$$

⁸ AEMC, p109

⁹ AER, Financial Reporting Guideline for Non-Scheme Pipelines, December 2017, p19

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The variables in these formulas are the sum of that variable calculated from the time of construction of the pipeline. As totals, this approach takes no account of the changing market conditions of the pipeline over time, including periods where a pipeline may not have had market power (such as after construction when building market share). Instead, this methodology takes the whole history of the pipeline and treats it as a block, and operates to confiscate any value derived from the pipeline from effort or cost reductions.

It is not mathematically possible for the regulator to start the calculation commencing at the time determination that the pipeline has market power. Because of this, the recovered capital methodology is a blunt valuing tool, that does not take account of the circumstances of the pipeline, and the risks its has faced in its economic life, and the going value of the pipeline to the market.

2.4 The Recovered Capital Methodology represents Sovereign Risk

The use of the recovered capital methodology for a pipeline already in existence represents the Government appropriating historic value from that pipeline, earned while operating within the laws of the day, taking that (already distributed) value away from shareholders and giving it to future customers. As HoustonKemp note

“On their face, the draft recommendations amount to a regulatory change that is unambiguously retrospective by design and effect. If implemented, the recommendations would cause a regulatory seizure of value or ‘sovereign risk event’, in circumstances that could not reasonably have been contemplated by those affected.”¹⁰

This is an unacceptable policy outcome that can be expected to have repercussions for investment in Australia.

¹⁰ HoustonKemp, AEMC’s draft initial capital base recommendations, 28 March 2018, p6

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2.4.1.1 Retrospective government appropriation of value

The retrospective nature of the harm done by the recovered capital methodology to the pipeline is extremely problematic from a good public policy point of view.

Reducing the value of the initial capital base using the difference between an assumed rate of return set by the regulator today and the revenue earned from the commencement of pipeline operation is retrospective in its very nature. It takes value away from future shareholders in the form of future net income reduced by the amount already distributed to deliver an effective return for current pipeline shareholders in line with today's government (regulator) view of appropriate returns over the life of the asset. This is retrospective and takes no account of circumstance of those earnings, and the risks involved.

It is a basic value of good government that unless someone is doing something illegal at the time of the transaction the Government should not come and seize any of that value at some point in the future. The ACCC, in its Inquiry report, was very careful to state that at no stage did it find that pipeline businesses were acting unlawfully in their pricing behaviour. Despite this, this policy penalises businesses for operating within the law and within a competitive market for pipeline services, seeking to grow the market, reduce costs and earn additional revenue.¹¹

The use of the backward looking recovered cost methodology is vastly different from setting of revenue or prices going forward that is an understood and accepted part of full regulation. This will have repercussions on investor participation in the pipeline market, and overall pipeline investment.

2.5 Negative impact on Investment

The appropriation of value by the Government will have a negative impact on investment. As noted by HoustonKemp

“Regulatory changes, as those proposed here, that are both retrospective and beyond reasonable expectations, are likely to cause significant damage to the incentives for future investment in and efficient operation of gas pipelines.”¹²

¹¹ ACCC 2016, Inquiry into the east coast gas market, April, pp102-3

¹² HoustonKemp, p6

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Because the policy recommendation is an appropriation of value (realised sovereign risk), it will also introduce uncertainty as to what future regulators and Governments could be willing to do to pipeline value when faced with rising wholesale gas prices. This will also be built into business's expectations when making future investment decisions.

The use of the recovered capital methodology for existing assets can be expected to do damage to the achievement of the National Gas Objective as it will reduce investment in new pipelines in Australia from what it would otherwise have been.

When making a decision on whether to invest in a new pipeline, or extend or expand an existing pipeline, any pipeline business will make a determination on the level of risk of the investment and will require that investment to provide a suitable expected rate of return prior to investment (expected risk adjusted return). All rational businesses do this with all investments.

While it is unclear what rate of return a regulator will use during the life of an asset, the introduction of the recovered capital methodology means that any business in making an investment decision must consider and take account of the possibility that the regulator is likely to use rates of return similar to the regulated rate of return. This will be necessary for the regulator in order to avoid undermining the arguments they use to support these values on fully regulated pipelines.

This has to be the working assumption by pipelines because the recovered capital methodology backdates the regulator's assessment of the rate of return to the commencement of the pipeline. As a result, investment decisions need to consider the worst case scenario in their decision-making.

The consequences will be that those projects that don't have risk levels low enough to make the regulatory rate of return attractive will not be constructed. This is counter to the National Gas Objective. Indeed, a key feature of the gas access regime is that parties can contract on terms as they see fit, in cases where the risk warrants it delivering outcomes in excess of the regulated rate of return for the pipeline business, as there is value for both parties in those arrangements. These types of arrangements will be at risk under the proposed asset valuation methodology.

The AEMC must note that the investment options available to pipelines are not restricted to the pipeline market. When determining where to invest, pipeline service providers consider a range of possible investments, both inside and outside the gas pipeline industry. In making investment decisions the

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pipeline service provider will select the options that provide the most attractive expected risk adjusted return. If the AEMC elects to significantly increase investment risk for pipelines this will make investment outside the pipeline industry relatively more attractive.

2.5.1 Signs of a negative impact on future investment

The signs, in particular the early warning signs, that regulatory risk has started to affect required returns demanded by investors in the gas pipeline industry will be/are difficult to detect, in particular for a regulatory body. This is because, at first, there will not be any absolute signs. General signs include:

- Prices will rise for new pipelines as the requisite rate of return to justify the investment goes up or the pipeline service provider seeks to recover the full cost of construction from the initial contracted user to reduce the likelihood that it may not be compensated for the market risk associated with recontracting. This will be difficult to identify as like for like price comparisons with existing pipeline construction costs is difficult.
- Projects that, as a result, are not economic at the higher requisite rate of return will, then, not proceed. This will be somewhat hidden because projects that do not proceed are generally not seen by, or known of in, the market generally.
- Pipeline businesses will increase their investments outside the Australian gas pipeline industry. At first this may be difficult to detect because there is likely to be a baseline investment outside the gas pipeline industry anyway. But this will become increasingly significant as risk levels rise and returns reduce in the Australian gas pipeline business, particularly in reference to higher returns available in offshore markets.
- Pipelines businesses will not tender for projects that don't fit their risk profile. Different pipeline businesses have different risk profiles and different views on the risk of individual projects so successful tenders will reduce, or at least be less competitive than today, rather than cease early on.
- There will be more investment in vertically integrated infrastructure by users that do not provide third party access to protect against the application of these schemes. This will reduce access to pipeline services by third parties and reduce the overall efficiency of infrastructure.

It will only be in the most extreme of circumstances that there would be a "capital freeze" and no investment in new projects would take place.

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It is important to note that while investment would likely continue, the risk is reflected in the price paid by shippers and the increasing reduction in competition for new pipeline projects. This is not an outcome in the long term interests of consumers.

In light of these considerations, it is important that the AEMC be aware that in its presentation to investors when releasing its 2017 financial year results APA outlined \$1.3b in growth projects. Nearly 2/3 (64%) of these projects are outside the gas pipeline industry¹³. APA also discussed its continuing investigation of North American investment options, including the establishment of an office in Houston. This behaviour is consistent with a prudent business reflecting the investment needs of its investors, who will continue to require an appropriate return on investment commensurate with the risks they are taking in that investment. The economics of any investment indicate that when faced with increasing risk, investors will demand increased returns or withdraw capital to invest in other jurisdictions that provide appropriate return for the risk take. While not definitive this forward-looking investment profile could be seen as the “canary in the coalmine” for regulators in that greater regulation can quickly lead to an undermining of future infrastructure investment.

2.6 Increases in gas pipeline prices

As noted above in section **Error! Reference source not found.**, businesses make the decision on whether to invest on expected risk adjusted returns. Businesses will have a range of investments under consideration and will prioritise those investments based on the risk profile of the business and the expected risk adjusted returns. As businesses are credit constrained (they do not have unlimited financing ability) not all projects will be undertaken.

As risk increases investors in businesses will require a higher return to construct pipelines or where the risk is higher than the investors in the business's risk profile the business will seek investment projects more consistent with this risk profile that provide the required expected risk adjusted return.

Both of these can be expected to increase the price of the pipeline to the shipper/s. A higher expected return on the investment feeds directly into the price of the service charged to the shipper and ultimately the customer. The second, the fewer bidders to provide the service the more likely it is that the lowest potential cost business (ie the business who would have won the

¹³ This treats the Yamarna Pipeline and Power Station entirely as a gas pipeline project.

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tender) will not seek to participate in the project, resulting in the construction of the pipeline being awarded to a higher cost provider.

While the recovered capital methodology might or might not bring down the price for the newly covered pipeline. It will increase the price on all new pipelines.

2.7 The recovered capital methodology is inconsistent with competitive markets and the NGO

For convenience, the National Gas Objective is set out below:

“to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas”

Competitive markets produce the required efficiencies in the long term interests of consumers by their inherent operation. That is competitive markets “promote efficient investment in, and efficient operation and use...for the long term interests of consumers”. Therefore, an understanding of market approaches to asset valuation and depreciation are useful for consideration of desirable regulatory outcomes.

2.7.1 Asset valuation and depreciation in markets

The price or prices¹⁴ in a market are set over time through the interaction of demand and supply. The value of assets used in the production of a service and economic depreciation of those assets are both an outcome of the price.

2.7.1.1 Asset Valuation in a market

The market value of the asset is either the current value of future net income flows or the value of the asset as traded.¹⁵ This means the value of the asset is forward looking. The recovered capital methodology is not forward looking, and is not consistent with competitive market outcomes. The recovered capital methodology uses historic capital expenditure. The amount that was

¹⁴ It is not necessary to maintain the artificial neo classical assumption of perfectly competitive markets that only a single price is set in the market for that statement about demand and supply to be true.

¹⁵ The two concepts are not unrelated. An asset will be sold where the two parties have different views of the current value of future income streams because they have different expectations of the income stream or different discount values.

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spent constructing the asset is irrelevant to the assessment of its current market value.

The effect is that a pipeline that has been successful, with considerable demand for services over its life, will, under this methodology, soon offer services at only marginal operating costs as any returns from success have been used to quickly pay off the initial construction costs. In contrast, a pipeline that does not reach its potential will have increasing tariffs, as returns do not meet benchmark levels of return, escalating the asset value. Neither of these outcomes is consistent with a competitive market.

- 2.7.1.2 *It is also worth noting that the approach absolutely caps upside returns from successful investment, but fully exposes the pipeline service provider to downside from unsuccessful investments, as an unsuccessful pipeline cannot hope to charge these ever increasing tariffs derived from the application of the recovered capital methodology. Economic depreciation in the market*

In the market, to the extent that there is a concept of depreciation, it reflects the change in market value of the asset in the period. This will reflect a range of factors, one of which is that the asset can be expected to be closer to the end of its economic life at the end of the period than at the start¹⁶ but also any changes in expectations of future revenue streams.

The recovered capital methodology of determining depreciation is flawed for this purpose. The value of past returns or any other historic value is not one of those factors relevant in a competitive market.

- 2.7.1.3 *Lessons for Regulation from the operation of markets*

For the reasons outlined in section 2.7, to best meet the National Gas Objective regulators should attempt to determine the asset valuation and depreciation as a market would in the absence of the market power.

There are a number of approaches to asset valuation and depreciation that are aligned with the outcomes produced in competitive markets.

Markets do not use the recovered capital methodology nor does the recovered capital methodology approximate the outcomes of a competitive market.

¹⁶ Although even this may not be true where a new technology has been created which extends the life of the asset.

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For the reasons outlined in section 2.4, the recovered capital methodology is not only inconsistent with the operation of markets, it is inconsistent with the National Gas Objective because it directly undermines investment in new pipelines in the long term interests of customers.

2.8 Recovered Capital Methodology undermines competitive outcomes

The construction of most pipelines is undertaken as the result of competitive market forces. This means that the price is neither more nor less than what it should be and there is no economically superior outcome available.

The recovered capital methodology requires capital expenditure, operating expenditure, tax and return on capital all to be included from the date of construction.

However, in order to calculate the recovered capital methodology the regulator is required to supplant the efficient outcomes of a competitive market with its own judgement of costs and returns, which in all circumstances will be inferior to using outcomes derived from a competitive market.

This means the recovered capital methodology will seize value from a pipeline from the time the pipeline was demonstrably not exercising market power (at the time of construction).

2.9 Recovered Capital Methodology destroys efficiency incentives

The recovered capital methodology destroys any of the positive incentive mechanisms that exist in competitive markets and which are trying to be built into the regulatory framework.

It removes the incentive to increase the utilisation of the pipeline as the additional revenue that generates is put at risk of appropriation in the form of higher depreciation resulting in a lower capital base.

It also removes the incentive to find operating cost efficiencies as a lower operating cost offsets less revenue and so risks being appropriated in the form of the a lower initial capital base.

It removes incentives to find new and more efficient ways to construct a pipeline because the initial capital value to be depreciated will be lower.

There are other mechanisms available to regulators for setting asset bases that can use those efficiencies to the benefit of consumers rather than remove them.

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2.10 The recovered capital methodology discriminates between shippers

As the Competition Economist Group notes in their report submitted to the ACCC East Coast Gas Inquiry, the use of the recovered capital methodology discriminates between shippers. This is due to the likely price reduction at the point that the AER deems the capital to have been fully recovered. Shippers on long term contracts prior to that point will be paying a price reflecting the recovery of the capital cost of the pipeline whereas shippers after that point will be paying a price reflecting only short run marginal costs.

2.11 The recovered capital methodology may delay production

The recovered capital methodology means that some users may delay commencing usage until after the asset base is deemed to have been fully recovered. This is because, after this point, the price of the pipeline will only reflect the marginal cost of operation. This not an outcome that would occur in a competitive market. CEG outline an example of why this is problematic:

“consider a gas field owner thinking about expanding output from their gas field. Other things equal, it would be rationale to delay that expansion “t” years to take advantage of artificially lower transport costs at that time.”

This is clearly not compatible with the National Gas Objective as it will result in customers paying a higher price for gas for longer, noting that pipeline transmission is only a small proportion of the customer's bill.

2.12 The recovered Capital Methodology is not widely used

For the reasons outlined above the recovered capital methodology is not commonly used as the main basis for calculating capital bases for many regulated industries.

There are some circumstances where it has been utilised for specific purposes. For example in ARTC Hunter Valley Coal Network Access undertaking it was put in place for pricing zone 3 extension as a mechanism to recover early losses associated with the coal mines ramping up production. Once the losses are recovered the asset roll forward will revert to a standard roll forward methodology similar to the AER's RAB Roll-forward Model. The rest of the ARTC access undertaking does not use the recovered capital methodology.

However, while this means it is used in the regulation of rail in certain circumstances to support new entry, it does not mean it is a common

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methodology, or one that should apply to established pipeline (effectively retrospectively) or over the full life of a pipeline.

2.13 Recommended Approach

It is important that the AEMC distance itself from the recovered capital methodology. The statement in the draft report to the extent that it means that the recovered capital methodology is consistent with economic depreciation undermines the National Gas Objective.

It is also unnecessary and has influence over likely regulator actions. As the rule drafter a statement by the AEMC can be interpreted as being an expression of the rule maker's intent and therefore can be used by the regulator subsequently to justify the recovered capital methodology as consistent with the National Gas Objective when in fact it could not do so if the AEMC had not drawn the erroneous connection.

Instead, a rule should be put in place that requires the regulator to state how the selection of a particular approach to setting the initial capital base best meets the National Gas Objective relative to the other methodologies that it considered.

APA is confident that the recovered capital methodology would not survive this test.

3 Other matters

3.1 Interval of Delay

The AEMC proposes:

"To amend the NGR in order to clarify that:

- the process for equalising revenue during an interval of delay is to result in a service provider being no better or worse off as a result of the interval of delay*
- the definition of the access arrangement period includes the period known as the interval of delay.*

To achieve this draft recommendation, the Commission expects that amendments to rules 3 and 92 of the NGR will be required."

APA notes that the interval of delay arises where there is a late regulatory decision –the regulator fails to make a decision before the current access

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arrangement period expires. In APA's experience, both AER and ERA have failed to make decisions in the allotted time. Some delays are relatively short (a month or two) while in one instance it has been lengthy (in the order of 9 months). "Interval of delay" issues can therefore be avoided by timely regulatory decision-making.

The AEMC's proposed rule amendment, which appears to sanction late regulatory decision-making, will require that the regulator take into account the revenue earned at the higher (lower) tariff of the preceding period to reduce (increase) the revenue over the remainder of the new access arrangement period. The result will be reference tariffs for the remainder of the new period which are, if the interval of delay is long, significantly below (above) those which will recover the service provider's forward looking costs. Those tariffs, which will apply for the remainder of the new access arrangement period, do not provide incentives for efficiency. They are below (above) the tariffs which should promote efficient operation and use of the natural gas services. They may, because they are artificially low (high), delay (bring forward) what would otherwise be efficient investment in a pipeline system.

The AEMC's proposed rule amendment, like current regulator practice, will, if implemented, address a perceived past inequity. It will do so in a way which does not comply with the revenue and pricing principles of the National Gas Law, and which cannot contribute to achievement of the National Gas Objective.

If long intervals of delay are seen to be a systematic problem (and no evidence has been provided to indicate that this is the case), then an amendment should be made to the NGR to ensure that the party controlling the outcome – the regulator – complies with its obligation to make a final decision within 13 months. At present, the sanction on regulator failure to comply is minimal: the regulator must only report its failure to the Council of Australian Governments Energy Council. Where those reports have been published, they have claimed that the reasons for delay lie in slow responses from service providers, and in the complexity of issues in the access arrangement revision process. But timing, and resourcing to address complex issues, are matters for the regulator, which controls the process once access arrangement revisions have been submitted.

APA has applied for judicial review of a decision by the Western Australian Economic Regulation Authority to address the regulator's taking into account a long interval of delay in the context of the last revisions to the Access

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Arrangement for the Goldfields Gas Pipeline. That review will test the meaning of rule 92(3). The Western Australian Supreme Court has not yet ruled on APA's application. No change should be made to rule 92 until a decision is handed down by the Court.

3.2 Terms and conditions

"The Commission considers the rules could be clarified in order to explicitly require the regulator to have regard to the risk sharing arrangements in the economic elements of the access arrangement when determining the non-tariff terms and conditions and the reference tariff variation mechanism."¹⁷

The AER and ERA already have the power to amend the terms and conditions set out in an access arrangement. The ability to make decisions on the terms and conditions was most recently demonstrated on the RBP access arrangement. RBP included amendments in its access arrangement proposal relating to the queueing policy. The AER rejected these amendments.

Therefore APA regards this as a clarification of existing powers rather than new powers for the regulator.

However, APA urges a note of caution in how this is executed. In the AEMC's analysis they state:

"the Commission notes that the allowed rate of return that is applied to the asset base to determine total revenue and reference tariffs is set to account for a degree of risk in providing the reference service."¹⁸

This is a slight but important mischaracterisation of the role of the rate of return.

The Rule 87(3) states

*"The allowed rate of return objective is that the rate of return for a service provider is to be commensurate with the **efficient financing costs of a benchmark efficient entity with a similar degree of risk** as that which applies to **the service***

¹⁷ AEMC, p 84

¹⁸ AEMC, p84

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provider in respect of the provision of reference services (the allowed rate of return objective)." [emphasis added]

The rule reflects the difference between diversifiable and non-diversifiable risk. Diversifiable risk (also known as non-systematic risk) is not reflected in the rate of return. The construction of terms and conditions in a contract are an example of non-systematic risk.

At the recent meeting of WACC experts for the AER Rate of Review Guideline there was broad consensus that there is a distinction between systematic and non-systematic risk and that non-systematic risk should not attempt to be included in the rate of return.¹⁹

While it is relevant for regulators to take into account risk in making a determination on an access arrangement, it is important that regulators not be given the impossible task of reflecting contract risk in the rate of return.

3.3 Reference services

3.3.1 Changes to criteria for reference service

The AEMC propose the following amendments to the framework

To amend the NGR in order to require the regulator to determine one or more pipeline services to be reference services, having regard to the following criteria:

- *historical and forecast demand for the service and the number of prospective users*
- *the extent to which the service is substitutable with other pipeline services*
- *the feasibility of allocating costs to the service*
- *the usefulness of the service in supporting access negotiations.*

It is unclear why the AEMC is proposing to reduce the discretion available to the regulators.

The current rule is rule 101 which states:

¹⁹ AER, Review of Rate of Return Guidelines concurrent expert evidence session 1, transcript of proceedings, p46

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(1) *A full access arrangement must specify as a reference service:*

- a. *at least one pipeline service that is likely to be sought by a significant part of the market; and*
- b. *any other pipeline service that is likely to be sought by a significant part of the market and which the AER considers should be specified as a reference service.*

(2) *In deciding whether to specify a pipeline service as a reference service, the AER must take into account the revenue and pricing principles.*

In order to challenge the regulators decision in relation to this provision the service provider would have to be able to demonstrate that the regulator made an error in law, ie behaved unreasonably. This would require the appellant to demonstrate one of:

- It is unreasonable to determine the service is a service.
- It is unreasonable to determine the service is sought.
- It is unreasonable to determine the proportion of the market is significant or likely to be significant.

This is a very high threshold for a successful appeal.

The scenario the AEMC outlines of a specific pipeline service sought by a large industrial user would be extremely difficult for the pipeline service provider to challenge its inclusion as a reference service. The regulator could definitely include this as a pipeline reference service with little fear of the decision being overturned later on appeal from the pipeline service provider or other party.

None of the circumstances the AEMC outlined in 4.1.2 are beyond the powers of the regulator currently.

3.3.2 **Upfront process to determine the reference services**

The AEMC proposes to introduce an upfront process to determine the reference services. APA supports the engagement with shippers in relation to the reference services required on the pipeline. The current regulatory process is too short for the regulator to be able to conduct a separate process just in relation to the reference service.

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The only note of caution APA puts forward is that the exact definition of the service affects both the price and demand for that service. It is important that discretion is left available to the regulator to refine the reference services during the access arrangement process. That is the upfront process should be like a framework and approach paper in that it provides guidance rather than be binding.

It is preferable to not lock in a reference service until you know the tariff impact of that definition of a service on both that service and other reference services.

An example of why a guideline type process is preferable to an upfront determination is demonstrated in the AER's consideration of the zonal reference services on the RBP. The AER concluded that the practical ramifications on actual outcome tariffs were not in the best interests of consumers in that circumstance. If the service had already been determined prior to that point the AER would have been forced to proceed with zonal services.

4 Minor comments on other recommendations

Clarify the application of the new capital expenditure criteria

The AEMC proposes to insert the word "and" in rule 79 between subrules 79(1)(a) and 79(1)(b) to make it clear that regardless of which subrule (2) criteria are relevant for the purposes of subrule 79(1)(b), the expenditure in question must also meet the prudence criterion under rule 79(1)(a).

Due to the wording of rule 79(1) there has never been any doubt amongst either regulators or pipeline service providers that all new capital expenditure is required to satisfy both rule 79(1)(a) and 79(1)(b). This particular minor drafting amendment probably does not need the status of a recommendation in the final report rather it could be addressed in the AEMC's minor changes gas rule change proposal in 2019.

Set the allowed return for speculative capital expenditure to at least the regulated rate of return

The AEMC propose to clarify that the rate of return to be applied to speculative capital expenditure under rule 84 of the NGR is, at a minimum, the return implicit in the reference tariff but that this could be adjusted upwards if the regulator deemed it was appropriate having regard to the circumstances of the particular investment.

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APA supports any moves to recognise the uncertainty of speculative capital expenditure but APA notes that the regulated rate of return is unlikely to be sufficient to attract this type of higher risk investment.

Require allocation of expenditure between covered and uncovered parts of a pipeline

Given the AER and ERA already require the pipeline service provider to provide both the allocated costs and methodology for allocation as part of their consideration of APA pipeline access arrangements, it is unclear why the AEMC find this change necessary. Regulators already are seeking this information and using it in their decision-making. It is difficult to see how a pipeline could demonstrate that their expenditure meets the requirements of rule 79 and rule 91 without providing this information.

Amend definition of rebateable services and rebate methodology to remove requirement to be in separate market

APA is not aware of any suggestion that this proved problematic in the AER reaching its recent decision on the RBP.

Require distribution pipeline service providers to disclose capacity and usage information

The idea that a transmission pipeline has a "nameplate" capacity, which can be made known and which might be useful to users, is a fiction created by policy makers. The fiction cannot be extended to the network of pipes which comprises the typical distribution system.

Give the regulator discretion to not pass on information requests to service providers

This is consistent with other aspects of the draft report where the AEMC is seeking to increase the discretion of regulators, a notable exception to the broader discretion is in relation to recommendation on coverage of expansions.

Introduce a financial and offer information disclosure regime for light regulation pipelines

It is APA's view that this outcome could already be undertaken by the regulator without a rule change if it were considered of value to users and prospective users.

Remove the requirement to provide KPIs as part of the access arrangement

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The original purpose of the KPIs was to support revenue proposals. They don't appear to have been used by service providers in that way. It is appropriate to remove them from the Rules.

Amend trigger for dispute resolution process

It is unlikely that the AER or WA Energy Dispute Arbitrator would interpret "unable to agree" as requiring proof the parties won't agree in the future. To do so would render the clause inoperable which was clearly not the intent of the drafters and therefore is unlikely to be interpreted to mean that. The amendment and introduced timelines seem unnecessarily bureaucratic and don't appear to reflect the reality of shippers' engagement with service providers.

Establish a reference framework for the dispute resolution body

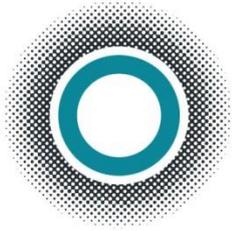
There is still significant elements of this recommendation to be determined. APA looks forward to engaging further with the AEMC as it further refines the nature of this recommendation.

Clarify that dispute resolution expert have access to subject matter experts

It is appropriate for the dispute resolution expert to have access to subject matter experts. However, it is important to maintain concepts of natural justice such that all parties be given opportunity to comment on the accuracy of the advice of subject matter experts.

Enable joint dispute resolution hearings

Where a dispute is on exactly the same issue it seems appropriate that they parties could be joined. However, changes need to introduce clearly defined boundaries that prevent parties introducing material unrelated issues to a joined dispute resolution.



HOUSTONKEMP
Economists

AEMC's draft initial capital base recommendations

A report for APA Group

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1. Introduction

The Australian Energy Market Commission (AEMC) is reviewing parts 8-12 of the National Gas Rules (NGR), which establish the framework of economic regulation that applies to covered gas pipelines. The objective of the review is to identify measures that would strengthen the existing regulatory framework, thereby leading to lower prices and improved services for pipeline users and gas consumers across Australia.

The AEMC has published a draft report¹ setting out its findings and draft recommendations. It has made several recommendations that affect the determination of the initial capital base for application in various aspects of the regulation regime, namely:

- to clarify the term 'depreciation' to mean economic depreciation when calculating an opening capital base;
- to require an initial capital valuation to be made for light regulation pipelines; and
- to enable the addition of existing extensions and expansions to the opening capital base of the relevant covered pipelines.

APA Group has asked us to assess the AEMC's draft recommendations in relation to the capital base and to examine:

- the extent to which they may be retrospective in their effect; and
- if so, the potential effect of such changes to efficient investment in and operation of gas pipelines; and
- further, the sovereign risk consequences of the proposed changes.

The focus of this paper is the economic and sovereign risk consequences of the above three particular draft recommendations made by the AEMC.

The remainder of this report is structured as follows:

- section 2 describes AEMC's draft recommendations and reasoning; and
- section 3 sets out our assessment of the AEMC's draft recommendations.

¹ AEMC, *Review into the Scope of Economic Regulation applied to Covered Pipelines*, 27 February 2018

2. AEMC's draft recommendations and reasoning

This section describes AEMC's draft recommendations and reasoning in further detail.

2.1 Initial capital base valuation for all light regulation pipelines

Under current provisions under the NGR, there is no requirement for light regulation pipelines to have a capital base valuation. However, some light regulation pipelines already have a capital base valuation, either because they have previously been subject to full regulation or there has previously been an arbitration decision that required such a determination.

Only two light regulation pipelines do not have any capital base valuation in place, namely, the Kalgoorlie to Kambalda pipeline in Western Australia and the Carpentaria gas pipeline in Queensland.

In its draft report, the AEMC recommends that the regulator must calculate a capital base for those light regulation pipelines that do not have one in place, and that the dispute resolution body is to apply the relevant initial capital base valuation in the event of a dispute.

The AEMC states that there are a number of benefits of having a capital base valuation for these two pipelines, namely²:

- increased certainty for service providers, users and prospective users as to dispute resolution outcomes in relation to tariffs
- the increased certainty improves the likelihood of a negotiated settlement
- if a dispute resolution in relation to tariffs was to eventuate, it would be simpler and quicker given the initial asset base, a key component in the determination of a tariff, has already been determined.

Although the AEMC recognises that there will be costs associated with developing an initial capital base, it contends that the benefits above would outweigh the costs. It also states that these costs would need to be incurred if there was ever a dispute resolution proceeding. Other regulators have indicated their support for such a rule if it were made.

2.2 Add existing extensions and expansions to the capital base

A number of past expansions and extensions to covered pipelines are 'uncovered', and so a capital base valuation for those expansions and extensions is not required. Given the AEMC's draft recommendation that such pipeline expansions and extensions be brought within the coverage regime, those affected expansions and extensions will now need to have an initial capital base derived for them.

In contemplation of this development, the AEMC has suggested that:

- the initial capital base that is associated with existing extensions and expansions be required to be calculated; and
- the existing extensions and expansions be included within the capital base of the relevant pipeline.

² AEMC, *Review into the Scope of Economic Regulation applied to Covered Pipelines*, 27 February 2018, p 109

2.3 Clarify the term depreciation when used in capital base valuations

The AEMC states that there is some uncertainty as to how to interpret the term 'depreciation' when calculating or updating a pipeline valuation, because:³

the use of different language in referring to "depreciation" in calculating initial capital bases under rule 77 in Part 9 of the NGR and "return of capital" in asset value determinations by an arbitrator under rule 569 of Part 23 of the NGR has raised the question of whether a different meaning is intended. The interpretation of "depreciation" in Part 9 and "return of capital" in Part 23 can have implications for asset valuations and as a result, the determined prices. The key driver of these different outcomes is whether past returns can be considered.

The AEMC takes the view that the depreciation referred to in rules 77(1) and 77(3) – concerning the calculation of the initial capital base for a pipeline – is 'economic depreciation', and neither accounting nor tax depreciation.

The AEMC then states that there are a number of approaches to estimating economic depreciation,⁴ including the Australian Energy Regulator's (AER) recent interpretation for Part 23 financial reporting purposes.

The AER's guidelines for Part 23 suggest that depreciation be based on the following formula:⁵

$$\sum_{i=1}^t \text{Return of capital}_i = \sum_{i=1}^t \text{Revenue}_i - \sum_{i=1}^t \text{Opex}_i - \sum_{i=1}^t \text{Return on Capital}_i - \sum_{i=1}^t \text{Net Tax Liabilities}_i$$

The AEMC recommends amending the NGR to clarify that the term 'depreciation' when applied in calculating an opening capital base in rule 77 refers to economic depreciation. The consequence is that the regulator or dispute resolution body has the ability to take into account previous returns on that pipeline when setting an initial capital base for a scheme pipeline.

³ AEMC, *Review into the Scope of Economic Regulation applied to Covered Pipelines*, 27 February 2018, p 108

⁴ We note that the approach identified by the AEMC/AER is not, in fact, economic depreciation, as defined in the mainstream economic literature. Conventionally interpreted, economic depreciation is the difference between the value of an asset at two different points in time, where that asset value is established by reference to its forward-looking service potential at those two points in time. In contrast, the AEMC/AER's interpretation of economic depreciation is a purely backward-looking formulation.

⁵ AER, *Financial Reporting Guidelines for Non-Scheme Pipelines Explanatory Statement*, December 2017, p 23

3. Assessment of the AEMC's recommendations

This section discusses the implications of AEMC's draft recommendations and their likely effect on incentives for investment and efficiency, and perceptions of future sovereign risk.

3.1 Implications of the AEMC's draft recommendations

The outcome of the AEMC's draft recommendations is that, for light regulation pipelines and for extensions or expansions of covered pipelines:

- there would now be a requirement to calculate a capital value for arbitration and/or price setting purposes when, hitherto, there has been no such requirement; and
- the calculation of the initial capital value must reflect the extent of past returns, where the return of capital element to be deducted from that capital value is to be derived as the difference between⁶:
 - > the revenue collected by the service provider since construction; and
 - > the cost incurred by the service provider since construction, including operating cost, tax liabilities and a deemed return on capital.

The consequence of these arrangements is that the capital value today for pipeline assets that have no history or expectation of regulatory oversight will be determined as an inverse function of past levels of efficiency and an appropriate return on capital. The AEMC's recommendations offer no guidance as to how that appropriate return on capital is to be derived, beyond the inference that this will be the subject of some form of regulatory decision.

Such an approach to determining the initial capital value means that pipelines that have achieved relatively high (or low) rates of return in the past – say, through incurring relatively efficient (or inefficient) levels of operating costs or earning revenues established by reference to relatively high (or low) expectations as to appropriate rates of return for taking on relatively high (or low) risk projects – will be taken to have been subject to a greater (or lesser) degree of 'economic depreciation'. The higher the rate of 'economic depreciation' that is deemed to have taken place, the lower will be a pipeline's capital base.

The calculation of a capital base using depreciation as recommended by the AEMC will require an ex-post determination on the appropriate rate on return to be earned over each year of the relevant historical period, taking account of the relevant, project-based risks expected at the time. This is likely to be an intrinsically difficult assessment to make and, by its nature, risks penalising higher risk projects that have ultimately been successful. We also note that return on capital estimates historically applying in relation to full regulation pipelines will be of limited relevance for such decisions, given the fundamental differences in risk profile.

3.2 Recommendations will give rise to asymmetric outcomes

The assessment as to whether a pipeline should fall under full, light or not regulated status is fundamentally determined by the degree of market power held by the pipeline and so its ability to influence competition in downstream markets. Put another way, pipelines that are likely to have a high degree of market power will generally be under full regulation. For these pipelines, the regulatory framework provides a pipeline service provider with a relatively high degree of certainty that it will be able to earn a return on capital and recover its costs of investment, including depreciation. This certainty derives from the intrinsic ability for reference tariffs to be increased to such an extent that full recovery of a covered pipeline's costs is reasonably assured.

In contrast, pipelines that are either not covered or fall under light regulation are likely to have much less influence on the market price for pipeline services, because there exists a range of close substitute services

⁶ This is consistent with AER's approach to calculating an initial capital base for non-scheme pipelines.

or there are only a small number of users of the pipeline in a position to influence the price paid for services. It follows that pipelines that are either under light regulation or are not covered are likely to face a much greater degree of market risk, ie, they do not possess the same intrinsic ability for tariffs to be set at such a level that full recovery their costs is reasonably assured.

The calculation of an initial capital value for subsequent price-setting or arbitration purposes by reference to past returns will compound these risks, since its effects will be asymmetric. This is because the decision by a user as to whether to initiate a dispute will no doubt depend on an assessment of the likely outcome of the process, which will be greatly influenced by the value of the initial capital base. Pipeline users are more likely to dispute charges on those pipelines that have had higher historical demand than expected (and so now have a relatively low initial capital base), thereby limiting the extent of future revenue and returns that can be recovered from these assets.

In contrast, pipelines that have been characterised by a history of relatively lower than expected demand (and so now have a relatively high initial capital base), are much less likely to have their charges disputed by pipeline users. In contrast to, say, the circumstances typically prevailing for a covered pipeline, the same market circumstances that may have caused past returns to have been relatively low are likely to continue to constraint the amount the pipeline owner can charge, so there is limited means to recover the relatively high capital base.

By way of the summary, the AEMC draft recommendations have capped the returns pipeline owners can earn on existing high risk pipeline investments, but without reducing the potential for downside risk or loss. This is because:

- assets with higher past returns/demand will be deemed to have been subject to a greater degree of depreciation, which would act to limit the future amount that can be recovered from these assets; and
- assets with lower past returns/demand will be deemed to have been subject to a lesser degree of depreciation, and perhaps even capital appreciation if negative returns have been experienced, but are likely to have more limited means to recover any 'increase' in their capital base given the constraints on demand for their services.

3.3 Recommendations will have retrospective effect

Separate from their asymmetric properties, the AEMC draft recommendations are retrospective as a matter of design. The 'depreciation' that is deemed to have taken place, and so the capital base to be applied in the context of future arbitration or price-setting arrangements, is established by reference to historical revenues and costs, including past operating costs and a deemed appropriate return on capital.

Where the assessed historical returns (net of costs) as determined by the regulator are high, then the capital value of the asset would be low. The consequence is an administrative assessment of costs and returns that is retrospective by effect, since the extent of past returns achieved in an environment of no or light regulation will now constrain the future pricing and returns achievable (as reflected in the value of the capital base to be adopted for future pricing decisions) by the affected pipeline assets, and so the market value of those assets. On their face, the draft recommendations amount to a regulatory change that is unambiguously retrospective by design and effect. If implemented, the recommendations would cause a regulatory seizure of value or 'sovereign risk event', in circumstances that could not reasonably have been contemplated by those affected.

The retrospective nature of the recommendations also means that the 'penalty' is borne by current shareholders of the relevant pipeline, even though past returns will already have been disseminated to the relevant shareholders at the time. There is no basis to presume these groups are the same, including for publicly-listed pipeline service providers, whose shareholders may change significantly over time

3.4 Conclusion

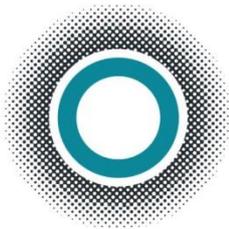
Certainty in regulatory arrangements is critical to determining the basis upon which costs will be recovered and so the reasonable expectations of investors as to their prospects for recovering the cost of an investment, including an appropriate return. Changes in regulatory rules that substantially affect the basis of, and prospects for investors to earn an appropriate return need to be handled with a great deal of care and sensitivity to the reasonably formed expectations of existing investors.

Although regulatory and policy changes are an accepted and appropriate part of the regulatory landscape and can be expected to evolve over time, the fundamental purpose of any changes must be to shape future investment and operating outcomes, rather than to recast events of the past. Regulatory changes, as those proposed here, that are both retrospective and beyond reasonable expectations, are likely to cause significant damage to the incentives for future investment in and efficient operation of gas pipelines.

Such damage to the incentive for otherwise efficiency conduct arises because a 'sovereign risk event' increases the perceived risk that investor's expectations as to the future return on and return of capital will not be met, thereby increasing the required return an investor will need to compensate for the perceived additional risk. Any increase in the returns required by investors will:

- increase the cost of providing services in the gas pipeline sector;
- increase gas prices; and
- have negative, consequential effects for all industry and consumers that use gas.

These outcomes are clearly contrary to the objectives the AEMC is seeking to achieve from its review as well as the national gas objective that must guide any decision to proceed with the AEMC's draft recommendations.



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