30 April 2026

Ms Anna Collyer
Chair
Australian Energy Markets Commission

Dear Ms Collyer,

Gas networks in transition Consultation Paper - GRC0082

Energy Networks Australia (ENA) welcomes the opportunity to respond to the Australian Energy Market Commission's Gas Networks in Transition Directions Paper.[1]

ENA represents the nation's electricity transmission, distribution, and gas distribution networks, providing essential services to more than 16 million connections across Australia.

As Australia's energy system transitions towards net zero, gas networks continue to evolve to meet changing customer needs. ENA continues to support a regulatory framework that remains flexible, proportionate, and centred on the long-term interests of consumers. ENA is supportive of an orderly energy transition and one that continues to encourage and provide safe and reliable services for all consumers.

ENA considers that the AEMC's Directions Paper continues to put the consumer at the centre of the transition. The Directions Paper preserves the core principles of the regulatory compact and the Revenue and Pricing Principles thereby maintaining consumer confidence, supporting efficient investment and ensuring continued delivery of safe, affordable and reliable services. These principles provide networks with a reasonable opportunity to recover efficient costs, which in turn underpins the long-term interests of consumers by sustaining service reliability and price stability.

Importantly, the Directions Paper focuses on earlier and more transparent use of existing regulatory tools rather than wholesale redesign of the framework. This is critical for investment stability in the sector, and for meeting consumer needs over the longer term through the energy transition.

ENA is encouraged by the level of stakeholder engagement that the AEMC has undertaken. Stakeholders have indicated that they have had constructive interactions with the AEMC and this is reflected in the Directions Paper which responds substantively to issues raised.

Summary of key points

The Directions Paper adopts a balanced, evolution-not-revolution approach that preserves the core elements of the existing regulatory framework, including the NGO, RPPs and regulatory compact, while strengthening transparency and adaptability for the transition.

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[1] AEMC, Gas Networks in Transition, Directions Paper, 19 March 2026

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The AEMC's focus on earlier and more transparent use of existing tools including depreciation, inflation treatment, capex/opex tests and tariff mechanisms, rather than wholesale redesign, is positive for investment confidence and supports continued delivery of safe, affordable and reliable services through the energy transition. Additionally, the recognition that the regulator should take a context-specific approach to its decision-making aligns with the different speeds of the transition for each jurisdiction.

Key ENA points for AEMC consideration:

- Implementation of the new 20 year outlook and related information requirements should improve consideration and transparency of outcomes beyond the AA period for both consumers and service providers. ENA has concerns with reference to a "*best forecast or* estimate" which implies a level of precision that is unachievable particularly over this long timeframe in a period when the energy system is in rapid transition. ENA encourages the AEMC to focus on how an AA proposal is most resilient to a range of potential futures rather than how it reflects a single 20-year outlook.
- ENA supports a shift toward more evidence-based proposals and decision-making for both service providers and regulators given the importance of the issues being tested. However, several concerns and risks remain: if not carefully drafted, the capex, opex and tariff provisions risk becoming overly prescriptive, creating hindsight tests or imposing disproportionate evidentiary burdens, rather than delivering targeted improvements in clarity and efficiency.
- ENA agrees with the AEMC's analysis that the rules should clarify the role of the regulator and require explicit consideration of the NGO and the RPPs in depreciation proposals. ENA considers that the incentives facing service providers when managing capital recovery are well aligned with the AEMC's stated objectives and therefore supports decision-making models for depreciation, inflation and redundancy that are consistent with Option C(i) which acknowledges that service providers are best placed to manage the risks associated with their decisions.
- Further work is needed on specific technical elements, particularly those around depreciation and the treatment of inflation, including:
    - The guidance in the amended rules for depreciation, including evidence of potential capital stranding.
    - The details of the amended rules to provide for a change in the treatment of inflation from a real approach to nominal
- The capital redundancy discussion requires further analysis, in particular:
    - Whether redundancy is considered in terms of physical asset redundancy or economic redundancy, or both circumstances; and
    - Whether capital redundancy, as a last resort mechanism, would only be implemented in circumstances where emerging market forces cause network prices to be below building block prices such that asset stranding can no longer be avoided.
- Should issues not be identified by stakeholders, ENA recommends the AEMC abandon the proposal to provide an interpretation of stand-alone cost as a switching point for the

purposes of imposing a constraint on reference tariffs that is unconnected to the service provider's cost.

1 Longer term outlook to manage uncertainty

ENA broadly supports the proposal to adopt a longer term outlook as a structured way for service providers and the regulator to consider transition pathways, capital recovery and consumer impacts over a 20-year horizon. This long-term outlook can help clarify how changes in demand and jurisdictional policy settings may affect asset utilisation and price profiles, supporting more transparent decisions, better informed stakeholder dialogue and better-informed regulatory decisions.

Much of this information is already provided by gas networks as part of regulatory proposals. Stronger requirements for the regulator to consider longer term outlooks will support better long term outcomes for customers in the face of uncertainty. ENA suggests providing the regulator with clear guidance on the use of this information in making regulatory decisions.

Since the future is subject to high uncertainty, it would be helpful for service providers to present, and for the regulator to consider, multiple scenarios. This is particularly important in circumstances where individual customer decisions contribute to a high level of uncertainty, for example customers electrifying one or more appliances in the home. In practice, this would involve assessing a range of plausible futures, including more extreme outcomes, and their potential consequences for network decisions.

There needs to be recognition of the limits associated with developing long-term forecasts. The challenge is not simply the difficulty of obtaining certain inputs, but that the information may be uncertain, unavailable, or of limited decision-making value. Requirements to provide "best estimates" over extended horizons, potentially including probabilistic assessments, will rely on layers of assumptions, particularly for factors outside the control of service providers. The value of a 20-year scenario analysis in the context of a five-year AA proposal is not to predict demand outcomes, but to inform decision-making today and ensure decisions are resilient to a range of potential futures.

Further guidance and clarification are required to define the scope and intent of the information sought, and to ensure it remains fit for purpose. For example, the Directions Paper states that forecasts should include how delivered gas prices are expected to compare with alternative energy sources over the outlook period. Clarification is needed on whether this implies service providers are expected to develop independent forecasts of energy markets beyond the gas sector. ENA's view is that expectations should be limited to information reasonably available from public or government sources, rather than requiring speculative modelling of external sectors.

Any new provisions should recognise that as the forecast horizon increases and as variables fall outside the networks's remit or area of expertise, reliance on assumptions increases, including in relation to wholesale or retail energy prices outside the gas sector. In this context, it is more helpful to focus on what can be credibly supported and on how decisions are made under uncertainty, including adopting a cautious approach where risks are asymmetric to the downside.

Service providers should have the scope to construct the 20-year outlook within a principles-based framework, so that the exercise stays proportionate and does not turn into a de

facto extension of the regulatory determination. Some flexibility is also needed to reflect differences between jurisdictions, including the way individual policy settings influence each network's transition pathway.

ENA supports the proposed direction on expenditure, in particular the consideration of alternative options that cannot be provided via a pipeline service. The Directions Paper notes 'Service providers would not have access to the necessary information to assess the relative costs and benefits of electrification or LPG tanks compared to a capex solution.'

ENA considers network planning requirements should increase over the long term across access arrangement periods, rather than introducing a high level of planning obligations immediately. The current environment is characterised by significant uncertainty, particularly around government policies, with only one network currently operating under a clear, government directed transition pathway. Imposing extensive planning requirements at this stage could create a disproportionate regulatory burden without delivering commensurate benefits to customers. As the operating environment becomes more certain, planning expectations can progressively expand, enhancing the value delivered to customers.

ENA notes that some elements of the proposal, for example the assessment of risks and uncertainties facing customers may be outside the control of the gas network, and the gas network may not be the best party to assess such risks, where they are defined by wider energy sector changes. More detail is perhaps needed to help assess how readily networks might be able to prepare this from the information they have to hand as part of the preparation of regulatory proposals and their normal course of business.

2 Amending capital cost recovery provisions

2.1 Depreciation

ENA supports the AEMC's focus on providing clearer guidance for the use of depreciation as the primary capital cost recovery tool in the transition. Depreciation provisions currently in the rules are relatively flexible, allowing for the period over which depreciation is recovered and the rate of recovery to be changed over time, depending on the conditions facing a service provider[2]. ENA notes the regulator has recognised demand risks yet allowed less depreciation than proposed by service providers. The depreciation provisions of the NGR give the regulator significant discretion when considering a service provider's depreciation proposal.

Right now there is very little guidance on how that discretion should be applied to long term outcomes, which leaves network service providers and in turn customers unclear about when and how that discretion will be applied. Setting out the situations in which accelerated or reprofiled depreciation is considered appropriate would make the regulators approach more transparent and predictable for both networks and consumers. It would make it easier to ensure that outcomes are tailored to individual network and jurisdictional circumstances.

Changes to depreciation provisions should remain neutral with respect to future demand pathways and should not hardwire an assumption of universal or rapid exit from gas. Replacing

[2] AEMC, Directions Paper, Gas Networks in Transition, p.65

references to demand growth with more neutral language may be appropriate if it avoids biasing decisions towards either growth or decline, while still recognising the potential for renewable gases and other new uses of gas infrastructure. ENA would not support approaches that materially restrict the circumstances in which depreciation tools can be used, or that risk undermining the reasonable opportunity for networks to recover efficient costs.

ENA considers that the rules should adopt a decision-making model that is premised on acceptance of the service provider's depreciation proposal, with only limited scope for the regulator to depart from that proposal. ENA accepts the AEMC's recommended Option C(i) as the most realistic option, with Option B also being a viable approach. This is further discussed in Appendix B.

- Clear objectives for a depreciation schedule should be established, consistent with the NGO and RPPs and with clear relevance to an uncertain or declining gas market:
    - Maintaining a reasonable opportunity to recover cost over the remaining economic life of the assets;
    - Maintaining incentives for the investment in, and efficient use of, pipelines over the remaining economic life of assets; and
    - Subject to the above, enabling stability in prices over time given the outlook for demand for services.
- There should be a low evidentiary threshold for stranding risk in requesting accelerated depreciation, given that for a network facing this risk, it is in their best interests to act optimally.
    - The depreciation rules should explicitly allow that a depreciation schedule may front-end depreciation where the service provider expects a material risk to future cost recovery, or
    - Alternatively, there could be a low threshold of evidence of stranding risk before the depreciation can be brought forward, i.e. that stranding risk is a real possibility rather than being definitively proven or quantified.

As noted by the AEMC, service providers have the incentive to make optimal decisions in depreciation schedules of balancing the risk of earlier customer exit with higher depreciation (and higher gas prices) against the risk of capital value at future risk of stranding, in situations where there is a risk of asset stranding.

2.2 Inflation

ENA supports the AEMC proposal to amend the treatment of inflation to support efficient recovery over time of the compensation for inflation and provide guidance for when it may be appropriate to use different approaches. The rules should require the regulators post tax revenue model to permit both real and nominal inflation approaches.

This guidance could involve setting out the circumstances in which a nominal (unindexed) approach may be appropriate. These changes create an opportunity to better promote the long-term interests of customers by removing the deferral of cost recovery where this is appropriate in the specific context of the decision.

ENA supports the AEMC's proposed direction, however, ENA suggests providing clarification on the interaction between the treatment of inflation and depreciation. ENA believes service providers should be able to switch inflation treatment and change depreciation simultaneously and clarification on this treatment should be made.

- The AEMC has noted that for a given depreciation method, having an indexed RAB will imply that more of the cost recovery is deferred to the future compared to a case where the RAB is not indexed for inflation.
- The advancement of cost recovery that is obtained by removing inflation indexation could also be obtained by retaining indexation but changing depreciation.

ENA considers that a workable decision-making model for the treatment of inflation would be limited discretion (Option C(i)) with Option B also being a viable approach. The AEMC should establish clear objectives for the treatment of inflation, consistent with the NGO and RPPs:

- Maintaining a reasonable opportunity to recover the compensation for inflation over the remaining economic life of the assets;
- Encouraging efficient use of the pipeline or network; and
- Encouraging stability in prices over time.

The rules governing how inflation is treated should avoid imposing a single prescribed method, whether a real-indexed approach or a nominal approach. Rather than locking in a single approach, the rules should leave room for the service provider's preferred methodology. In practice, there are often sound commercial and operational reasons to favour one method over another. Giving providers the ability to choose the approach that best suits their circumstances helps keep the framework workable and responsive to the economic conditions faced by businesses delivering these services.

2.3 Redundant capital provisions

ENA is supportive of the AEMC's direction of the redundant capital provisions including the intent to use capital redundancy as a last resort mechanism. To ensure the effectiveness of this change, ENA has some suggested changes, which are analysed in detail in Incenta's attached report: Gas Networks in Transition: Analysis of the AEMC's Proposals for Capital Recovery.

The AEMC proposes changes to the NGR to:

- Allow the redundant asset provisions of the rules to be used where required to replicate what would occur in a competitive market;
- Allow the regulator to remove partial redundant capital from the capital base, subject to mandatory consideration and constraints in the Rules, including a materiality threshold;
- Replace the access arrangement redundant capital mechanism with a rules-based mechanism;
- Amend the re-use of redundant capital provisions to provide for appropriate tests for the re-use of both full and partial redundant capital; and
- Clarify the role of the regulator in requiring partial capital to be removed from the capital base, including clear constraints on the regulator's ability to do so.

The AEMC proposes rule changes that would allow both service providers and the regulator to remove fully or partially redundant capital from the capital base when it is clear that the asset cannot be fully recovered and when doing so reflects competitive market outcomes. The regulator would gain the ability to require partial redundancy, but only once all other regulatory tools for cost recovery of efficient costs have been utilised.

Redundant capital could later be reinstated if recovery becomes possible, using the existing test for fully redundant assets and a demand-based test for partially redundant assets. The AEMC's position assumes that service providers will be reluctant to voluntarily apply redundancy provisions—even when consistent with the NGO and RPPs—because doing so effectively writes down their capital base.

ENA considers that the following provisions would better meet the NGO and RPPs.

- Capital redundancy should remain at the discretion of the service provider, reflecting their strong incentives to identify and isolate unrecoverable capital in a redundant capital account, and recognising the significant risk to investment incentives if redundancy is imposed by the regulator. The decision-making framework should therefore involve only limited regulatory discretion (AEMC Option C(i)) or no regulatory discretion (Option B).
- Capital redundancy, particularly partial redundancy, should be treated as an economic concept, defined in terms of the portion of the capital base that cannot be recovered. It should not be framed as a matter of physical redundancy, such as specific assets becoming unused or asset values being linked to declining service volumes or underutilised capacity.
- The distinction between "full" and "partial" redundancy should be abandoned. The distinction distracts attention from the core issue of whether capital value can be recovered.
- Clear objectives for capital redundancy should be established, consistent with the NGO and RPPs, for example:
    - Adjustment of the value of the capital base to align with the ability of the service provider to recover capital costs in prices for pipeline services under prevailing market conditions.
- There are better mechanisms than redundancy to protect the interests of customers.
    - Networks will set prices that are intended to retain their "footloose" customers and the benefits of this competition with electricity will flow through to all customers.
    - Governments are able to implement customer protections where loss of customers means many remaining customers face barriers to switching, through targeted assistance packages.
- Capital redundancy should only be considered in ex post terms as 'revealed redundancy', ie when it is observed that service prices during the last Access Arrangement Period were being set by the service provider at levels below the regulated

prices and therefore insufficient to recover all capital costs, and that this practice is reasonably expected to continue.[3]

    - To the extent that the regulator is given the power to impose partial capital redundancy, then this should only be permitted on 'revealed' redundancy.

- Simple criteria should be established for removal of value from the capital base and adding-back value to the capital base consistent with concepts of financial redundancy:
    - Value removed from the capital base when it is not recoverable.
    - Value added back to the capital base when it is recoverable.
    - For the amount that is "parked" in the partial redundancy account to be carried forward by the regulatory WACC.

There are alternatives to the proposed AEMC approach for the protection of consumers through periods of declining demand on specific networks. If the Commission's aim is effectively to set a price cap based on competitive or switching-point benchmarks, this could be done transparently through a clear price-cap mechanism rather than via complex partial redundancy removal and reinstatement provisions. Alternatively, redundancy could be treated as a loss-capitalisation mechanism, where the gap between revenue and the cost of service is tracked in an account, carried forward at the regulatory WACC.

3 Amending capital and operating expenditure provisions

3.1 Capex provisions

ENA broadly supports the AEMC's objective of improving regulatory clarity and transparency in the capex provisions. Clarifying that all capex must be justified through a quantitative assessment of all credible options is consistent with existing good practice and with networks' obligation to demonstrate efficiency. Importantly, this should not be interpreted as implying that multiple credible options will always exist. In some cases-particularly where a 'do nothing' approach is not viable, a single option may reasonably satisfy the prudency and efficiency tests. ENA's position is that any such requirement should be applied proportionately, so that the depth of options analysis reflects the materiality and risk of the project, and that the regulator's assessment continues to recognise the practical constraints, safety obligations and timing pressures under which some investment decisions are made.

ENA is not opposed to the consideration of whether NGR rule 79(2)(b) is still required but note that the NPV test should continue to apply during the transition period for the purpose of the ex-post review. Additionally, the NPV analysis under 79(2)(a) (the economic test) is still relevant and warranted.

[3] Incenta, Gas Networks in Transition: Analysis of the AEMC's Proposals for Capital Recovery, p.6.

In relation to safety-related capex, ENA sees merit in refocusing the test from “maintain and improve the safety of services” to “necessary for the safe operation of pipelines and use of services” where this provides clearer alignment with safety and technical regulation. Networks would, however, be concerned if revised wording were interpreted narrowly so as to limit prudent preventative or resilience-building expenditure that demonstrably reduces safety risks to customers and the community. Especially considering safety requirements are set by the jurisdictional regulator and any change to the rules cannot contradict existing jurisdictional safety regulations. ENA therefore supports an approach that clarifies the safety test without unintentionally constraining efficient investment needed to comply with safety obligations or manage emerging hazards over the transition.

ENA considers that updating the capex criteria to refer to maintaining capacity to meet forecast levels of demand, rather than existing demand, is conceptually consistent in a transition environment characterised by uncertainty and potential declines in demand. A forward-looking approach helps ensure that investment decisions are based on the best available information at the time. However, forecasts carry uncertainty and efficient investments made on the basis of reasonable forecasts should not later be judged inefficient simply because actual outcomes differ. The framework should continue to assess decisions against the information that was reasonably available at the time they were made.

In this context, ENA has some concern about how this change may be applied in ex-post reviews. While a forecast inherently reflects existing conditions, it is essential that the regulator does not apply hindsight or substitute its own preferred forecast after the fact. The relevant benchmark must be the forecast that the service provider reasonably relied upon at the time the capex decision was made. Clear guidance is needed to ensure that prudency assessments remain anchored in contemporaneous information rather than retrospective judgement.

ENA supports the intention to require service providers and the regulator to explicitly link the driver for capex proposals to one (or more) of the capex provisions in the National Gas Rules (NGR), on the basis that this is largely an administrative clarification. Clear articulation of whether a project is, for example, driven by safety, compliance, demand, replacement or other needs can assist stakeholder understanding and promote more transparent decisions. ENA’s position is that this requirement should not become a new substantive hurdle or a technical ground for disallowance where the underlying expenditure is prudent and efficient; rather, it should operate as a documentation and explanation tool within the existing capex assessment framework.

3.2 Opex provisions

Clarifying the definition of opex, including removing references to expenditure aimed at increasing long-term demand, is sensible where it better reflects current policy settings. At the same time, ENA considers it important that any revised wording preserves flexibility for efficient operational activities that support safe and reliable services, manage transition risks for customers, and facilitate ongoing use of gas infrastructure where this remains in consumers’ long-term interests.

4 Amending reference tariff provisions

4.1 Reference tariffs for distribution pipelines

ENA notes and can see potential benefit from the proposal to require service providers and the regulator to explicitly consider and explain how tariff classes and structures will impact customers within and beyond the access arrangement period. A clearer narrative on distributional impacts, bill stability and affordability across different customer groups can assist consumers, governments and investors to understand how the transition is being managed. However, no issue has yet been identified with the current framework, supporting no change being made. ENA's position is that this analysis should be proportionate and should complement, rather than displace, the existing efficiency and cost-reflectivity principles that underpin reference tariff design.

ENA considers clarification is warranted to suggest long-run marginal cost (LRMC) need only be considered where it contributes meaningfully to the design of cost-reflective reference tariffs. In practice, LRMC can be a useful tool in some contexts but is less helpful where demand is declining or highly uncertain. It would be useful for any guidance to make clear that LRMC is one input into tariff design, not an inflexible requirement, would help avoid formulaic application, allowing networks and the regulator to focus on tariff structures that are workable, understandable for customers and consistent with the National Gas Objective and Revenue and Pricing Principles.

4.1.1 Reference tariff provisions

With regards to the proposed amendments to reference tariff provisions to assist providers and regulators with applying the concept of standalone costs appropriately under different circumstances that may arise during transition, ENA has concerns that the methodology contained in the Directions Paper refers to calculating standalone costs with reference to competing energy sources. The Directions Paper refers to a switching point. ENA considers that tying standalone cost directly to a "switching point" between fuels risks importing assumptions about competition and customer behaviour that are highly uncertain and outside network control. Using a standalone cost as a potential 'switching cost' to impose a constraint on reference tariffs would introduce a cost unrelated to the cost to provide network services. Imposing this provision would undermine the networks' ability to recover efficient costs, contradicting the principles in the NGO and RPPs. This is further discussed in Incenta's attached report in Appendix B.

Establishing the cost of switching fuel source would require estimating, among other things, the cost of all affected households and businesses changing over appliances and potentially rewiring premises. There may be other costs that would be difficult for a service provider to ascertain, such as the 'need to upgrade the electricity network to support electrification.' In ENA's view, any requirements in this area should be framed around information that service providers can reasonably obtain and use, with broader system and policy assessments led by governments and market bodies.

4.2 Tariff variation mechanisms

ENA supports the AEMC's focus on improving the transparency and design of tariff variation mechanisms so they remain effective under changing demand and customer numbers. Well-

designed mechanisms can help manage transition related volatility by allowing tariffs to adjust in a controlled way as key drivers evolve, rather than requiring large step changes at each reset. ENA's position is that any reforms should preserve flexibility for networks and the regulator to tailor variation mechanisms to each access arrangement, maintain clear and predictable rules for when adjustments occur, and ensure changes are explained in terms that customers can understand.

5 Decommissioning

ENA notes that the AEMC has explicitly stated that the development of a decommissioning framework is out of scope for this Directions Paper. While this is understandable given the broader policy and legislative questions involved, it leaves a material issue unresolved for both consumers and networks as some parts of the gas system approach potential end-of-life decisions. It is likely decommissioning would have to be considered in 20 year outlooks at various points in time for different network businesses, and while it is deemed outside of scope, it may warrant further consideration in this regard.

In ENA's view, a clear decommissioning framework, undertaken by governments that are driving decommissioning through current policy settings and developed in close consultation with regulators, networks and consumer groups, will ultimately be needed to provide certainty about responsibilities, funding arrangements and consumer protections as transition pathways become clearer. Such a decommissioning framework may not be required in jurisdictions where continuing use of gas networks in the longer term is envisaged through the energy transition, including through renewable gas policies.

Please find at Attachment A, ENA's detailed responses to the questions contained in the Directions Paper. Attachment B contains a report by Incenta *Gas Networks in Transition: Analysis of the AEMC's Proposals for Capital Recovery* commissioned by ENA as part of our preparation for this submission.

If you wish to discuss any of the matters raised in this response, please contact Russell Pendlebury, General Manager, Regulation and Policy, at rpendlebury@energynetworks.com.au.

Yours sincerely,

Dominique van den Berg
Chief Executive

ATTACHMENT A

Questions for stakeholders

Question 1: Our proposed package of reforms

1. What are stakeholder views on our assessment of the proposed direction and how it better promotes the NGO and is consistent with the RPP, in comparison to the status quo and the ECA and JEC rule change proposals?

As Australia's energy system transitions towards net zero, gas networks are evolving to meet changing customer needs and energy uses. ENA continues to support a regulatory framework that remains flexible, proportionate, and grounded in the long-term interests of consumers. ENA is generally supportive of the proposed direction presented by the AEMC and considers that, overall, it better promotes the National Gas Objective and is more consistent with the Revenue and Pricing Principles than both the status quo and the rule change proposals. ENA encourages the AEMC to continue to develop this package within the National Gas Law (NGL) and National Gas Rules (NGR) in a way that preserves these strengths. However, ENA has concerns, outlined below, and encourages the AEMC to address these in finalising the package so that it continues to give effect to the National Gas Objective and Revenue and Pricing Principles.

As noted in our submission to the consultation paper, the rule change proposals put forward by Energy Consumers Australia and the Justice Equity Centre risk reducing flexibility in regulation and embedding assumptions about the future of gas networks that do not reflect the diverse policy settings and consumer preferences across jurisdictions. These proposals carry the significant risk of undermining investor confidence in the regulatory framework, to the detriment of long-term customer outcomes. By weakening confidence in the stability and predictability of the regime, the proposals could contribute to a more disorderly transition, with the greatest impacts falling on vulnerable customers and those least able to transition early. ENA considers that these proposals may undermine the regulator's ability to apply the RPPs and promote the NGO. ENA welcomes the AEMC's consideration of these concerns and its efforts to develop an alternative package of reforms that better aligns with the long-term interests of consumers.

Question 2: Implementation considerations

1. Do stakeholders consider that there are any barriers to implementing our proposed package of reforms considering the planned publication of the final determination in December 2026? Do you consider some form of transitional arrangements are required for any element?
2. Do stakeholders consider there are any significant implementation costs associated with our proposed package of reforms that the Commission should consider?

ENA considers that the proposals in the Directions Paper create a strong opportunity to enhance long-term planning and regulatory transparency. ENA cannot identify any material barriers and considers there is sufficient time to implement these reforms in the next round of final decisions post December 2026. Delaying implementation would force service providers and customers to wait another five years for reforms that provide certainty and support affordability measures. The introduction of 20-year planning requirements within access arrangements will support more strategic, forward-looking decision making. Stakeholders can develop and align the necessary systems and processes to produce these plans in a way that ensures accuracy, consistency and confidence across the sector.

ENA encourages the Commission to consider the costs involved in establishing the longer-term outlook. There are likely to be significant one-off costs to setting up these systems, including developing forecasting tools, integrating new processes into existing planning and regulatory models, and resourcing additional analysis and consultation. However, these costs can be examined as part of the access arrangement processes if they are significant.

Question 3: Application to transmission and distribution

1. What are your views on our proposed direction that reforms should apply to distribution and transmission pipelines (where relevant)?

ENA supports the reforms applying to distribution and transmission pipelines where relevant.

Question 4: Our proposed direction on a longer-term outlook (detailed in Appendix A)

1. What are your views on our proposed direction to require service providers and the regulator to consider a longer-term outlook and longer-term consequences?
2. Do you have any views on the information or analysis that should be included in a service provider's 20-year outlook?

ENA is broadly supportive of the introduction of a longer-term outlook requirement. We agree that taking a longer-term view can provide important benefits, particularly in understanding how best to use capital cost recovery tools to manage price and stranding risks in the context of uncertain or declining demand and in clarifying when each tools may be appropriate. If applied well, a 20 year outlook can also help place individual access arrangement decisions within a clearer transition context for consumers and policy makers. However, the reference to producing the best forecast should not create a false sense of precision. The purpose of a long-term outlook should not be to predict which future is most likely, but rather to ensure that current decisions and AA proposals are resilient across a range of plausible futures.

More information can also lead to more informed and efficient decisions on the future investment needs of the network and future tariff arrangements. However, the longer-term outlook needs to be designed in a way that is practical for service providers to prepare and genuinely assists the regulator's decision-making, rather than becoming a compliance exercise.

It is positive that the proposal includes a requirement on the regulator to explain why it may have a different view on the outlook than that presented by the service provider. Additionally, the regulator would be required to set out its alternative forecasts and apply these consistently across its decisions. It is also helpful that the regulator would be required to assess and report on the consequences of its AA decisions for both consumers and service providers over the 20-year period. ENA supports these accountability measures, as they can help ensure that any alternative outlook adopted by the regulator is transparent, internally consistent and clearly understood by stakeholders.

The answer to this question is further detailed in section 1.

Question 5: Our proposed direction on capital cost recovery (detailed in Appendix B)

1. What are your views on our proposed direction for capital cost recovery tools in the NGR?

2. Do you have any views on the decision-making model options explored for:
   a. Depreciation and treatment of inflation?
   b. Redundant capital provisions?
3. In relation to our proposed direction for redundant capital, do you have any views on:
   a. The materiality threshold that should apply to partial redundancy?
   b. The constraints that could apply to the regulator's use of partial redundancy?

See Section 2 above.

Question 6: Our proposed direction on expenditure (detailed in Appendix C)

1. What are your views on our proposed direction to amend the NGR capex provisions? For example:
   a. Clarifying that service providers must justify all capex through a quantitative assessment of all credible options that support the provision of regulated pipeline services.
   b. Amending the justification for safety-related capex to be necessary for the safe operation of pipelines and use of services in NGR rule 79(2)(c)(i).
   c. Amending the justification for capex to maintain capacity to meet forecast (instead of existing) demand for services under NGR 79(2)(c)(iv).
2. What are your views on the need for the NPV test in rule 79(2)(B)?
3. What are your views on our proposed direction to amend the NGR opex definition?

ENA is generally supportive of the proposed direction to amend the NGR capex provisions to better meet the challenges of uncertain demand. However, any changes should be aimed at enhancing clarity and consistency without creating unnecessary prescriptiveness or hindsight tests.

As noted in the Directions Paper, service providers already consider alternatives to capex in practice. ENA is concerned that changes put forward by the AEMC could add prescription to the NGR, increasing the administrative burden and reducing flexibility. It is acknowledged in the Directions Paper that service providers are already incentivised to consider opex options, where they are practical alternatives to capex options, as this reduces new capex entering the capital base and therefore reduces stranding risk.

The ENA notes that the Directions Paper is not recommending that service providers consider alternative options that cannot be provided via pipeline services (eg electrification or LPG tanks) as service providers do not have access to the necessary information to assess the relative costs and benefits of electrification or LPG tanks compared to a capex solution. ENA supports this

clarification and considers it important that the rules are clear that service providers are not expected to undertake detailed analysis of non-pipeline alternatives where the relevant information is outside their control.

The Directions Paper notes that "*If it is not practicable to justify a particular type of capex using quantitative cost-benefit analysis, the service provider would need to explain why this is the case and the regulator would consider whether an alternative approach is reasonable."* ENA encourages the AEMC to include a requirement for the regulator to provide a detailed explanation as to why an alternative approach is reasonable/preferred.

ENA is supportive of amending the justification for safety-related capex in the NGR to "*necessary for the safe operation of pipelines and use of services*". This outcomes-based framework should provide customers with greater confidence that capex would not go beyond what is necessary to provide a safe and secure network. At the same time, the wording should not be interpreted so narrowly that it constrains prudent preventative or resilience-related investment needed to manage emerging safety risks.

ENA is supportive of replacing the reference in the capex criteria to maintaining capacity to meet existing levels of demand, with maintain capacity to meet forecast levels of demand. This change supports consistency across the rules, removes any presumption that existing demand levels will continue, and recognises that some service providers may face declining demand in parts of their networks. A forecast necessarily reflects conditions at the time, but the benchmark for assessing prudency should be the forecast the service provider reasonably relied on then, not one reconstructed with hindsight. Making this principle explicit will help maintain confidence in ex post reviews and support efficient, timely investment decisions.

As discussed in Section 3 (above) ENA is not opposed to the consideration of whether NGR rule 79(2)(b) is still required but note that the NPV test should continue to apply during the transition period for the purpose of the ex-post review. Additionally, the NPV analysis under 79(2)(a) (the economic test) is still relevant and acceptable.

ENA is supportive of amending the definition of opex to remove the reference to expenditure being incurred to increase the long-term demand for pipeline services and otherwise develop the market for pipeline services. ENA supports the definition of opex being neutral in relation to demand and that it should not expressly refer to expenditure being incurred to increase long-term demand. ENA further notes that the provisions in the NGR refer to pipeline services rather than the type of gas underpinning pipeline services, therefore renewable gas is also covered. ENA considers that this neutrality is important so that the opex framework can accommodate both declining and evolving demand, including potential future uptake of renewable gases.

Question 7: Our proposed direction on tariff arrangements (detailed in Appendix D)

1. What are your views on our proposed direction for amending the reference tariff arrangements?

2. What are your views on our proposal to provide guidance on applying the concepts of long run marginal cost, standalone and avoidable costs?

3. What are your views on our proposal to require service provider and the regulator to give greater consideration to customer impacts in setting tariffs and tariff variation mechanisms?

ENA is supportive of the AEMC considering amending the rules to support service providers and the regulator applying the efficiency concepts in a context-specific way as this will enable a broader range of demand and jurisdictional policy scenarios to be accommodated. However, further detail on the drafting and guidance is required before ENA can fully support the amendments.

ENA also supports clarification that long-run marginal cost (LRMC) need only be considered where it contributes meaningfully to the design of cost-reflective reference tariffs. ENA considers the application of standalone cost as a switching cost misinterprets the intended mechanism. This is discussed further in Section 4.1.1 and Appendix B.

ENA is not convinced of the need to require service providers and the regulator to give greater consideration to customer impacts in setting tariffs and tariff variation. As stated in the Direction Paper, "*Service providers and regulators are already implicitly required to consider the long-term interests of consumers when designing reference tariff arrangements that meet the NGO."* ENA does not consider that additional requirements are necessary as the framework already ensures that the customer impact is central to the development of tariffs and tariff variations. If guidance is pursued, ENA's preference would be for it to be principles based and non-prescriptive.

Additionally, one of the areas suggested for consideration on competition, specifically "*how competition and the outlook for competition from alternative fuel sources is expected to influence customer behaviour and how a service provider should take this into account through the design of tariff classes, structures and variation mechanisms."* This is inconsistent with early sections of the Directions Paper where the AEMC acknowledges that it is unreasonable to expect service providers to assess the relative costs and benefits of alternative energy sources (with reference to capex) as they do not have access to the necessary information. The same would apply for making an assessment on competition from alternative fuel sources and how this would impact customer behaviour, and ENA considers that such broader market assessments are better undertaken by governments and market bodies, not individual networks.

See section 4.

Question 8: Incentive mechanisms (detailed in Appendix F)

1. Having regard to our proposed direction, do you consider there is need for additional or modified incentive mechanisms for service providers?

ENA is not supportive of the AEMC considering the need for additional or modified incentives.

ATTACHMENT B

Gas Networks in Transition: Analysis of the AEMC's Proposals for Capital Recovery, Incenta Economic Consulting, April 2026

Gas Networks in Transition: Analysis of the AEMC's Proposals for Capital Recovery

Energy Networks Australia

April 2026

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1. Introduction and Summary

1.1 Scope of work

On 19 March 2026 the AEMC released its Directions Paper responding to rule change proposals for the National Gas Rules (NGR) from Energy Consumers Australia and the Justice and Equity Centre. The AEMC proposes rejecting these proposals and instead making rule changes in four areas relating to revisions of access arrangements and pricing of pipeline services:[1]

- requirements to consider longer-term outlooks of demand for services
- recovery of capital costs, including depreciation, compensation for inflation, redundant capital and re-use of redundant capital
- justification of capital and operating expenditures having regard to longer term demand outlooks, and
- tariff structures and variation mechanisms.

Incenta Economic Consulting ("Incenta", "we", "us") has been engaged by Energy Networks Australia (ENA) to review the AEMC's proposed rule changes relating to recovery of capital costs and one aspect of the AEMC's proposed rule changes relating to reference tariffs, being to impose an upper bound for tariffs defined in terms of a "switching price" set at an estimated value that might motivate gas customers to switch to an alternative energy source.

1.2 Capital recovery

The AEMC's proposed rule changes in relation to recovery of capital costs are made to address projections of decreasing demand for transmission and distribution services and the potential for transmission and distribution assets to become "stranded"; that is, for assets to become unused and/or the asset value in the regulatory asset base to become unrecoverable due to decline demand for gas and competitive constraints on pricing of gas and gas-pipeline services.

As a general comment, we consider that the AEMC's proposals derive from a sound analysis of the problem of capital recovery in the circumstances of prospects of a declining gas market.

- The AEMC gives primacy to the National Gas Objective (NGO) and Revenue and Pricing Principles in capital recovery:
  - recognising that the long-term interests of gas consumers, including an orderly transition away from natural gas to electricity, are best served by maintaining incentives for service providers to invest in pipelines and to continue to provide safe and reliable services, and
  - recognising that the Revenue and Pricing Principles require that service providers are to have a reasonable opportunity to recover costs

[1] Directions Paper, p.iv.

- The AEMC disagrees with the proposals of ECA and JEC to limit arbitrarily the extent of capital recovery by service providers and force the stranding of capital value in order to limit increases in consumer gas prices. The AEMC does not accept the assertion that accelerating depreciation involves a transfer of costs and stranding risks to consumers and takes the view that the ECA's and JEC's proposals would not be in the long-term interests of consumers and so would not promote the NGO and would be inconsistent with the Revenue and Pricing Principles.

- The AEMC recognises that allowing service providers to recover a greater portion of their capital earlier in an environment of declining demand would result in more efficient reference tariffs for consumers, promote intergenerational equity and support incentives for efficient investment, without altering the total amount that consumers pay in present value terms.

- The AEMC is implicitly critical of decisions of the AER that have constrained the extent to which service providers may bring forward depreciation, with the constraints being arbitrary limits on increases in regulated prices to levels that the AER determined to be acceptable as a "balancing of interests" between service providers and gas consumers.

- The AEMC acknowledges that its proposed rule changes may result in gas consumers facing higher prices in the near term.

- The AEMC proposes that service providers should be able to, where feasible, manage stranding risk by bringing forward depreciation to align with forecasts of demand for pipeline services.

- The AEMC proposes that compensation for inflation should be able to be changed from a real indexed approach (where the cost of inflation is capitalised and recovered over the remaining life of assets) to a nominal approach (where the cost of inflation is recovered within an access arrangement period), which has the effect of bringing forward revenue.

- The AEMC proposes that, at least for the most part, asset redundancy should be an ex post response to materialised constraints on capital recovery arising from market forces and declines in demand for pipeline services, rather than being imposed on service providers by regulators.

- The AEMC considers that social policy objectives in supporting consumers through a transition from gas to electricity is a broader responsibility of governments rather than a manner to be addressed solely through access regulation.

- The AEMC considers that "form of regulation reviews" should be considered if and when pricing of network services becomes constrained by competition from other energy sources.

Notwithstanding our generally favourable view of the AEMC's analysis and proposals in relation to capital recovery, there are several aspects of the proposed rule changes that the AEMC is still to reach a view on. The matters still to be resolved will affect the ability of service providers, under the amended rules, to recover capital costs and, as a result, the exposure of service providers to capital stranding.

The unresolved matters are as follows.

- The decision-making model for depreciation, treatment of inflation and asset redundancy, specifically whether this is a model of "limited discretion" or "full discretion" for the regulator.[2]

- The guidance in the amended rules for depreciation, including requirements for evidence of potential capital stranding.

- The details of the amended rules to provide for a change in the treatment of inflation from a real approach to a nominal approach.

- The details of the amended rules for capital redundancy, including

  – whether redundancy is considered in terms of physical asset redundancy or economic redundancy, or either or both in particular circumstances, and

  – whether and in what circumstances capital redundancy may be imposed ex ante by the regulator into regulated price determinations on the basis of forecasts (i.e., to reduce the capital base to a level that delivers regulated prices at levels consistent with the price levels that a service provider is expected to be able to sustain), or recognised only ex post (i.e., to reduce the capital base to a level that delivers regulated prices corresponding to the price levels that the service provider is observed to charge in the market for services).

When determining the detail of rule changes the AEMC should recognise the incentives faced by service providers that are consistent with the NGO and Revenue and Pricing Principles:

- service providers have a strong incentive to bring forward capital recovery only where there is a perception of risk of asset stranding and only to the extent consistent with efficient pricing of services; that is, that maximises the consumer benefit of maintaining gas pipelines in operation while managing the risk of capital stranding, and

- service providers would have a strong incentive to use a mechanism of ex post capital redundancy to "park" unrecovered capital where competition with other energy sources constrains service prices below regulated prices resulting in capital stranding.

Another important contextual matter is that the direction and envisaged outcomes of the AEMC's proposed rule changes would (and are intended to) cause a pivot from the theme of recent regulatory decisions. This context highlights the importance of clarity in the new rules.

Our conclusions in each of the three areas of rule changes relating to capital recovery are as follows.

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[2] In this report we use the terms "full discretion" and "limited discretion" as previously used in the NGL and NGR, with limited discretion meaning that the regulator must first determine that an element of a service provider's proposal on an element of an access arrangement is inconsistent with the NGO or the Revenue and Pricing Principles before replacing the proposal with an alternative approach, and full discretion meaning that the regulator may require an alternative approach if the regulator considers the alternative would better promote the NGO and Revenue and Pricing Principles.

Depreciation

- The depreciation rules should be premised on accepting the service provider's proposal. The decision-making model for depreciation should be one of no or limited discretion for the regulator (i.e., the AEMC's Options B or C(i)).

- Clear objectives for a depreciation schedule should be established, consistent with the NGO and Revenue and Pricing Principles and with clear relevance to a declining gas market:

  – maintaining a reasonable opportunity to recover cost over the remaining economic life of the assets

  – maintaining incentives for the investment in, and efficient use of, pipelines over the remaining economic life of assets, and

  – subject to the above, enabling stability in prices over time given the outlook for demand for services.

- There should be minimal evidence required of stranding risk. Rather than neutral language in relation to future demand, the amended rules could contemplate that all networks are likely to face some risk to future cost recovery and so identify (as a replacement for the current example of back-ended depreciation) accelerated depreciation as a possible outcome under the provisions. Moreover:

  – the depreciation rules should explicitly allow that a depreciation schedule may front-end depreciation (i.e., allow more depreciation in the current period than future periods) where the service provider perceives a risk to future cost recovery, or

  – alternatively, there could be only a low threshold of evidence of stranding risk before depreciation can be bought forward; that is, that stranding is a real possibility rather than being definitively proven or quantified.

- Key terms could be defined in the rules, or additional guidance could be provided, for example:

  – "Economic life" (a term used in the rules) for an asset or group of assets could be defined as the minimum period in years, reasonably derived, from the current time over which operation of the assets or group of assets will be commercially viable under all plausible demand outlooks, where commercially viable means that the assets return revenues sufficient to sustain operation.

  – Guidance could be provided to ensure that the prospects for cost recovery when determining the depreciation method are evaluated using assumptions that are consistent with a lowest, plausible outlook for cost recovery. For example, the guidance could require cost recovery to be tested using forecasts that reflect the most adverse (i.e., lowest or highest, as relevant), plausible outlook for key inputs, reasonably derived, over the economic life of the assets, with "key inputs" including such matters as demand, the drivers of willingness to pay (such as the price of substitutes) and government policy decisions.

Treatment of inflation

- The decision-making model for the treatment of inflation should be one of no discretion (i.e., the AEMC's Option B) or limited discretion (Option C(i)).
- Clear objectives for the treatment of inflation should be established, consistent with the NGO and Revenue and Pricing Principles:
  - maintaining a reasonable opportunity to recover the compensation for inflation over the remaining economic life of the assets
  - encourage efficient use of the pipeline or network, and
  - encourage stability in prices over time
- The rules for the treatment of inflation should not mandate either a real (indexed) method or a nominal method but rather should be premised on accepting the service provider's proposed treatment.

Capital redundancy

- Capital redundancy should be at the discretion of the service provider, recognising the strong incentives of service providers to monitor and park unrecoverable capital in a redundant capital account, and the substantial risk to investment incentives of regulator-initiated redundancy. The decision-making model should be one of no discretion (i.e., the AEMC's Option B) or limited discretion (Option C(i)).
- Capital redundancy (particularly partial redundancy) should be considered as an economic concept and in terms of financial redundancy (i.e., a dollar amount of the capital base that is unable to be recovered) and not physical redundancy (i.e., specific identified assets or proportions of the value of assets related to declines in service quantities or underutilised capacity).
- The distinction between "full" and "partial" redundancy could be abandoned.
- Clear objectives for capital redundancy should be established, consistent with the NGO and Revenue and Pricing Principles.
  - Adjustment of the value of the capital base to align with the ability of the service to recover capital costs for pipeline services under prevailing market conditions.
- The objectives for capital redundancy should not encompass the protection of vulnerable customers in periods towards the end of pipeline lives.
  - Additional customer protection is less necessary in the short to medium term as the benefits of networks competing and pricing for customers likely to switch will flow through to all.
  - In addition, even once customer protection may be warranted (e.g., when a majority of customers face barriers to switching), better mechanisms exist, such as through retail gas price regulation, or targeted government assistance to vulnerable customers.

- Capital redundancy should be considered only in ex post terms as "revealed redundancy"; that is, when it is observed that service prices during the last Access Arrangement Period were being set by the service provider at levels below the regulated prices and therefore insufficient to recover all capital costs, and that this practice is reasonably expected to continue (i.e., the discount against the regulated price caps was not a consequence of transitory factors).
  - To the extent that the AER is given the power to impose partial capital redundancy, then this should only be permitted based on "revealed" redundancy (i.e., the observation that the service provider has been setting prices systematically below the regulated price caps, and where this is reasonably expected to continue).
- Simple criteria should be established for removal of value from the capital base and adding-back value to the capital base consistent with concepts of financial redundancy:
  - value removed from the capital base when in is not recoverable
  - value added back to the capital base when it is recoverable.
  - for the amount that is "parked" in the partial redundancy account to be carried forward by the regulatory WACC.

1.3 Reference tariffs

Under Rule 94 of the NGR, reference tariffs are determined by allocating total revenue (i.e., the cost of service) to customer classes (tariff classes) and then to component charges of reference tariffs applying to each tariff class. The allocation of total revenue to a customer class is subject to the constraint that the revenue to be recovered from a customer class is to lie on or between the upper bound of the stand alone cost of providing the service and the lower bound of avoidable cost.

The AEMC proposes providing "additional guidance" to service providers and regulators for setting reference tariffs. The specific proposal is to introduce an interpretation of "stand alone cost" as an amount of cost determined with reference to the estimated value of the switching price at which members of a tariff class would reasonably switch to another energy source. The estimated switching price would then essentially set a cap on reference tariffs.

In contrast to the AEMC's work on capital recovery that is for the most part rigorous and sound, we consider that the proposal to impose an estimated switching price as a cap on reference tariffs is problematic and warrants further thought.

We consider that the AEMC:

- has adopted an interpretation of the "stand alone cost upper bound" constraint for tariff setting that is inconsistent with its intended purpose
- proposes to change how the constraint operates in a manner that is inconsistent with the operation of the upper bound constraint in price regulation in other sectors
- proposes to introduce into the scheme of reference tariff determination a disconnect between the determination of total revenue (that is determined with reference to costs) and the determination

of reference tariffs (currently determined with a view to recovery of the total revenue given a forecast of demand)

- in so doing, increases the risk to cost recovery in contrast to the proposed changes to the depreciation provisions of the NGR that seek to reduce this risk, and
- does not adequately address whether the proposal is consistent with the NGO and Revenue and Pricing Principles.

2. The AEMC's proposals

2.1 AEMC's characterisation of the problem

In our view the AEMC has rigorously defined the regulatory problem of capital recovery to which its proposed rule charges are directed.

- The AEMC properly characterises the problem of capital recovery in the face of market decline as an adjustment to the time path of capital recovery given a change in the outlook for demand for pipeline services – both the economic life and the demand profile. The change in the time path of capital recovery does not change the value of cost recovery in present value terms.

- The AEMC recognises that a realigning of capital recovery with an updated outlook for future demand for pipeline services is consistent with the long-term interests of consumers through maintaining incentives for the capital investment that will be required to keep pipelines operating and promote price stability and equity for gas consumers over the remaining pipeline lives.

- The AEMC identifies that adjustment of the time path of capital recovery does not impose on gas customers the stranding risk that arises from a projected decline in gas markets. Rather, pipeline service providers face the asset stranding risk that arises from a change in energy markets and increasing competition from electricity. Allowing for adjustments to the timing of capital recovery does not alter or redistribute the stranding risk arising from the change in energy markets, but rather provides service providers with an ability to manage this risk and avoids creating a stranding risk deriving from the regulation.

The AEMC notes:[3]

> *However, it is important to recognise that depreciation is the means by which service providers are repaid the efficient capital that they have invested in an asset. Contrary to what the proponents and some stakeholders suggest, the Commission does not accept the view that the acceleration of this repayment involves a transfer of costs and risks to consumers. This is because, absent any decline in demand, consumers would have paid the same capital costs in net present value terms; acceleration changes only the timing of the recovery, not the total.*
>
> *When demand is falling, continuing with a straight-line approach would defer an increasing share of cost recovery into future years when there are fewer gas consumers remaining to use the service. This creates a growing mismatch between who benefits from the use of the asset, and who is required to pay for it. Allowing service providers to recover a greater portion of their capital earlier in an environment of declining demand ensures that capital cost recovery is more in line with the expected use of the pipeline. This would result in more efficient reference tariffs for consumers, promote intergenerational equity and maintain incentives for efficient investment, without altering the total amount consumers pay in net present value terms.*
>
> *That is not to say that consumers bear all the risk associated with the capital that a service provider has invested. Rather, the risk ultimately sits with the service provider, because if demand falls faster than expected or there are other technological or market developments*

[3] Directions Paper, pp.66,67.

that constrain what a service provider can charge, then they may be unable to recover all the capital they have invested. Put simply, accelerated depreciation does not immunise service providers from the risk of stranding; rather it ensures that cost recovery better aligns with the period in which demand exists.

Accelerated depreciation is, nevertheless, an important regulatory tool that, in the Commission's view, a regulator should use where it is feasible to do so. This is particularly the case where there are a relatively large number of customers still connected to the network to spread the fixed costs across and gas prices remain below the customer switching point.

The timely use of accelerated depreciation can reduce the risks that uncertain or declining demand can expose consumers and service providers to, and thereby help support a more orderly energy transition. That is, by:

- *Providing for a more economically efficient (and smoother) time profile of prices and more equitable outcomes across all consumers, with current and future customers making equivalent contributions to the recovery of efficient capital costs.*
- *Mitigating the price and other adverse impacts that customers facing financial, technical or other barriers to switching could otherwise face. These customers could include renters, certain commercial and industrial users, people living in community or social housing, low income households and other vulnerable customers, residents in apartments, and industrial customers that face additional challenges to switching.*
- *Reducing the capital at risk of stranding and so continuing to incentivise service providers to continue to operate the network, invest where it is efficient to do so and provide a safe and reliable service to remaining customers.*

2.2 AEMC's intentions and expected outcomes with changes to the NGR

In relation to capital recovery, the AEMC proposes changes to the NGR in respect of depreciation, the treatment of inflation and asset redundancy.

The AEMC's intention with the proposals for depreciation and inflation is to allow recovery of capital costs and compensation for inflation to align with the demand for services, and the proposals for capital redundancy are intended to reconcile the value of the regulatory capital base with amounts of capital able to be recoverable. These intentions are made clear at pages 41 and 70 of the Directions Paper:

At a high level our proposed changes would allow for the following where service providers are facing uncertain or declining demand:

- *service providers to better align the recovery of capital with the expected use of the network, by reducing the extent to which depreciation and compensation for inflation is recovered in later years while:*
  - there are still a relatively large number of customers to recover costs from, and

  - delivered gas prices remain below the price of competing fuels that could trigger price driven reductions in gas consumption and connections (the 'switching point').

- *service providers and/or the regulator to remove partial or fully redundant capital from the capital base when it becomes clear stranding cannot be averted (i.e. the service provider is unable to recover a full return of and on capital) and it is necessary to respond to competition, or otherwise replicates what would occur in a workably competitive market*

- *the regulator to add any redundant capital back into the service provider's capital base if it later becomes clear it can be recovered.*

At a high level, the proposed direction provides for service providers, facing uncertain or declining demand to be able to do the following (subject to regulatory oversight), while there are still a relatively large number of customers to recover costs from and delivered gas prices are below the switching point:

- *use the depreciation provisions to recover a greater portion of capital earlier through changes to either the economic life and/or depreciation profile, where that is consistent with the depreciation criteria, the NGO and RPPs*

- *use the treatment of inflation provisions to cease deferring the recovery of compensation for inflation by moving to a nominal (unindexed) approach, where that is consistent with the NGO and RPPs.*

The AEMC's envisaged outcomes from the rule changes in terms of the NGO and the Revenue and Pricing Principles are set out at pages 42 and 43 of the Directions Paper:

Together, these elements of our proposed direction would promote the NGO by:

- *Improving outcomes for consumers over the longer term and promoting principles of market efficiency by providing for a more economically efficient (and smoother) time-profile of prices. This would support the efficient use of gas networks and provide for more equitable outcomes over the longer term. For those customers that face financial, technical or other barriers to switching, the proposed direction would also help to mitigate their exposure to inefficient prices and the risk service providers decide to cease operations earlier than expected. More generally, the proposed direction would help to support an orderly energy transition.*

- *Supporting the safety, security and reliability of services and promoting principles of market efficiency by preserving service providers' incentives to prudently and efficiently operate their networks, invest where necessary (including in compliance with applicable safety standards and regulations) and continue to provide safe and reliable services.*

- *Aligning with good regulatory practice and being consistent with broader gas market reform by ensuring service providers and regulators can use the capital cost recovery tools to manage the risks and impacts associated with uncertain and declining*

> *demand, and sufficiently flexible to deal with the different positions each service provider is in.*
>
> *Our proposed direction is also consistent with the* [Revenue and Pricing Principles]*, because it would:*
>
> - *provide service providers a reasonable opportunity to recover at least their efficient costs*
> - *promote economic efficiency by ensuring service providers continue to have an incentive to efficiently provide pipeline services and efficiently invest, where necessary*
> - *avoid the costs and risks of:*
> - *underinvestment that may otherwise arise if service providers believe they will not have a reasonable opportunity to recover at least their efficient costs, or*
> - *overinvestment that may otherwise arise if the redundant capital provisions could not be used where it is appropriate to do so.*

2.3 Overarching issues of concern

While the AEMC has properly characterised the problem of capital recovery and proposed well-directed changes to the NGR to address this problem, we consider that there are some elements of the AEMC's reasoning that warrant further consideration as the AEMC proceeds to develop the detail of the rule changes.

First, the AEMC does not appear to sufficiently recognise that the incentives of service providers in capital recovery are aligned with the AEMC's intentions. For example:

- Service providers would seek to depreciate assets over a shorter asset life and front-end depreciation only to an extent that consistent, but not greater than, reasonable beliefs about asset life, demand for network services and asset utilisation. Rational investors would seek to preserve the value of the capital base as long as the investors have confidence of capital recovery. Indeed, the AEMC implies that service providers might improperly seek to advance depreciation in circumstances where there is not a risk of asset stranding under existing depreciation schedules.[4]

- Rational service providers would reduce network prices below levels of regulated tariffs where regulated tariffs cause an exodus of customers (i.e., exceed the "switching price" and thereby forgo capital recovery with the effect of making some capital value stranded and redundant.

Secondly, the direction and envisaged outcomes of the AEMC's proposed rule run contrary to recent regulatory decisions, particularly by the AER who has restricted the bringing forward of capital recovery to avoid or constrain increases in pipeline service prices and consumer gas prices. This

[4] Directions Paper, p.73. The AEMC states that "[w]here service providers are not facing the risk of stranding, their incentives may not be as well aligned with the NGO and RPPs, so greater regulatory oversight may be required.

context highlights the importance clarity in the rule changes, including to assist regulators to resist the pressure to apply a short-term focus to matters that impact on the opportunity for networks to recover their costs and that is contrary to the NGP and Revenue and Pricing Principles.

3. Depreciation

3.1 Current rules

The determination of depreciation allowances in a building block calculation of required revenue is governed by rules 88 to 90 of the NGR:

- Rule 88 requires that depreciation allowances be determined in accordance with a depreciation schedule for the pipeline assets
- Rule 89 establishes the design criteria for a depreciation schedule, being:
  - so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and
  - so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and
  - so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and
  - so that (subject to the rules about capital redundancy), an asset is depreciated only once (i.e., that the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base (adjusted, if the accounting method approved by the AER permits, for inflation)); and
  - so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.

  Rule 89 also contemplates that a depreciation schedule may defer depreciation (i.e., recover more depreciation in future periods than the current period) where significant market growth is expected.
- Rule 90 requires that an access arrangement include provisions governing the calculation of depreciation for the purposes of rolling forward the capital base from one access arrangement to the next, in particular resolving whether depreciation of the capital base is to be based on forecast or actual capital expenditure.

3.2 AEMC's direction and proposals

The AEMC considers that the existing rules provide service providers with flexibility to adjust depreciation depending on the demand outlook,[5] but that regulators have allowed less advancing than proposed by service providers, despite recognising demand risks.[6] The AEMC notes that the AER has conceived its role as limiting price increases to avoid customers leaving gas networks and preventing a death spiral, as well as to balance the interests of service providers (at least some recovery of costs)

[5] Directions Paper, p.50.
[6] Directions Paper, pp.61,62.

with consumers (price impacts and affordability).[7] The AER's decisions have been enabled by the depreciation provisions of the NGR providing the regulator a considerable degree of discretion when deciding whether or not to approve a service provider's depreciation proposal with limited guidance provided to the regulator on how to exercise that discretion.[8] The AEMC notes that the decision making model for depreciation under the NGR is different than under the NER where the regulator has limited discretion – the NER only allows the AER to use a different depreciation schedule if it determines that a service provider's proposal does not conform with the depreciation rules in the NER.[9]

The AEMC proposes changes to the depreciation provisions of the NGR to enable service providers greater opportunity to bring forward depreciation in circumstances of an outlook of declining demand and a risk of asset stranding in the absence of changes to depreciations schedules. The AEMC's proposed changes to the depreciation provisions are as follows.[10]

- Provide more guidance on the circumstances in which accelerated depreciation may be appropriate. The guidance could involve removing references to growth in demand and setting out the circumstances in which bringing forward the recovery of depreciation may be appropriate:
  - use of the asset is expected to decline over the remaining economic life, or
  - the asset is otherwise facing a risk of stranding.
- Replace references to demand growth with more neutral language.

The AEMC has considered but has not reached a position on the decision-making model for depreciation proposals contemplating a choice between:[11]

- Option C(i) – the regulator can replace a service provider's proposal for depreciation only after first determining that the service provider's proposal is inconsistent with the NGO and RPPs (limited discretion), and
- Option C(ii) – the regulator can replace a service providers proposal for depreciation with an alternative depreciation subject only to the regulator considering that the alternative better promotes the NGO and RPPs (full discretion).

The AEMC rejects a fully service-provider determined approach to depreciation (Option B) for reason that the service provider may have incentives over the choice of depreciation method that are not aligned with the NGO and Revenue and Pricing Principles in circumstances where service providers are not facing stranding risk.[12]

The AEMC states that its proposed changes to rules governing depreciation will allow for:[13]

7 Directions Paper, pp.61,62.
8 Directions Paper, p.50.
9 Directions Paper, pp.50,51.
10 Directions Paper, pp.42,73,74.
11 Directions Paper, p.72.
12 Directions Paper, p.73.
13 Directions Paper, pp.41,43.

- *service providers to better align the recovery of capital with the expected use of the network, by reducing the extent to which depreciation … is recovered in later years while:*
  - *there are still a relatively large number of customers to recover costs from, and*
  - *delivered gas prices remain below the price of competing fuels that could trigger price driven reductions in gas consumption and connections (the 'switching point').*

3.3 Our assessment of the AEMC's proposals

We consider that the AEMC's proposed direction for amending the depreciation provisions of the NGR is generally sound and consistent with the NGO and Revenue and Pricing Principles.

In developing the detail of the new rules for depreciation, we consider that the AEMC should further consider the following matters:

- the AEMC's statement that incentives of service providers may not align with the NGO and Revenue and Pricing Principles when proposing depreciation schedules in circumstances where there is no risk of asset stranding, and the AEMC considering this to be important in determining the decision-making model for regulation, and
- the pressure for regulators to adopt a short term focus in decision making and limit the extent to which service providers are permitted to bring forward depreciation, with a view to seeking to minimising increases in service prices and the (near term) price impacts on gas consumers, if this remains possible under the new rules.

On the first of these matters, we consider that the AEMC is incorrect in its assessment of the incentives of service providers where there is no stranding risk, implying that service providers would have an incentive to bring forward depreciation to an extent inconsistent with efficient use of pipelines.

The commercial incentive of service providers where there is no risk of asset stranding would be to preserve value of the capital base consistent with expectations of economic life and the forecast future demand profile. This is evidenced from experience. For the greater part of the near 30 year history of the economic regulation of gas pipelines in Australia, demand forecasts and depreciation schedules were proposed by service providers (and accepted by regulators) without contemplation of any material attention to declining the demand for gas and potential for economic stranding of pipeline assets. There is no evidence of service providers in these circumstances seeking to inefficiently bring forward depreciation. To the contrary, the preference of service providers was clearly to preserve value in regulatory asset bases by depreciating assets over long economic lives determined on the basis of asset technical lives.

The observed behaviour of service providers in the absence of risk of asset stranding is entirely consistent with the NGO, Revenue and Pricing Principles and the depreciation criteria under the current NGR. We see no reason to suspect that, in the absence of risk of asset stranding, the incentives and depreciation proposals of service providers would differ from past practice.

In addition, it is difficult to think of any gas pipeline (distribution network or transmission pipeline) that is not subject to material asset stranding risk, and indeed regulators have already accepted that

most of the facilities that are subject to full regulation face material asset stranding risk.[14] Accordingly, the AEMC's caution that the rules need to accommodate pipelines that do not face material stranding risk is unwarranted.

We also think the AEMC is correct to assume that service providers faced with stranding risk will not have an incentive to accelerate depreciation more than is necessary to reduce that risk. Rather, as service providers do not know with certainty the extent to which they are able to raise prices before a material increase in switching is encouraged, we would expect service providers to adopt a cautious approach when determining their preferred depreciation method.

On the second matter of the AER's past practice of limiting the extent to which depreciation may be brought forward, and general pressure for consumer prices to be minimised, there is risk of such decisions continuing despite inconsistency with the NGO and Revenue and Pricing Principles if this remains possible under the rules. To address this risk, we consider that the AEMC's changes to the NGR should provide explicit permissions and guidance to bring forward depreciation and adopt a decision-making model of limited discretion of regulators.

We address further matters of detail in the depreciation provisions as follows.

Detailed and specific objectives and criteria for depreciation

The AEMC is proposing greater guidance in the rules setting out the circumstances in which bringing forward the recovery of depreciation may be appropriate.

We consider that this guidance should establish explicit permissions for service providers to bring forward depreciation over a remaining economic life of assets where there is a declining gas market. This guidance would best take the form of more specific objectives and criteria for depreciation. The economic principles and guidance for depreciation from the gas regulatory framework (comprising the NGO, the Revenue and Pricing Principles and the existing rule 89(1)) suggests that guiding objectives and criteria for depreciation should include:

- maintaining a reasonable opportunity to recover cost over the remaining economic life of the assets
- maintaining incentives for the investment in, and efficient use of, pipelines over the remaining economic life of assets, and
- subject to the above, enabling stability in prices over time given the outlook for demand for services.

[14] Most of the eastern states' transmission pipelines are subject to light regulation and so not subject to the depreciation rules; however, these facilities also face material asset stranding risk. Whilst some transmission pipelines are expecting increasing demand over the next decade – which is being underpinned by substantial investment – this reflects in large part the shift in the location of production from Bass Strait and Moomba to Queensland, and material demand uncertainty exists over the medium to long term.

Explicit contemplation of a material risk to future cost recovery in the NGR

The AEMC proposes to amend the NGR to replace references to demand growth with more neutral language, presumably that contemplates demand outlooks in directions of either growth or decline.

Consistent with the earlier discussion, we consider that a case can be made for the AEMC to take a stronger approach than simply opting for neutral language on demand (and thereby cost recovery) outlooks.[15] Current trends and outlooks for gas demand and "net zero" policy settings of governments would be sufficient reason for the depreciation provisions to explicitly contemplate that all networks face a material risk to the recovery of costs in a similar manner that the provisions currently contemplate market growth (and, implicitly, no constraints to pricing).

A presumption of material risk to cost recovery in the rules would reduce the burden on service providers to demonstrate the existence of stranding risk, which is difficult to conclusively demonstrate. There will always be a high degree of uncertainty about whether and to what extent stranding is likely to occur, and the best that could be expected is a demonstration that stranding is a real possibility rather than to be definitively proven. As noted earlier, reliance can also be placed on the incentives of service providers to not bring forward depreciation unless they perceive a real risk of asset stranding.

Determining economic life and the demand outlook

Economic lives of assets, future demand and other matters that will affect future cost recovery are likely to be matters of contention between service providers, regulators and users. In the absence of specific guidance on the meaning of these terms in the rules, there is a risk that outlooks for future demand, economic lives and other matters will be moderated in order to reduce the price increases as depreciation is bought forward. The guidance for depreciation should discourage this.

Where there is uncertainty, service providers should be permitted to apply pessimistic outlooks for asset lives, demand and other matters when determining depreciation schedules. It would be incorrect to apply statistically *expected*[16] economic asset lives or "median" scenarios of asset life, demand and other key inputs when calculating depreciation. Rather, the economic lives and demand outlooks applied in calculating depreciation should allow cost recovery in all plausible scenarios. To do otherwise implies that there is a residual (and uncompensated) risk of capital stranding, which is the risk of realised demand being less than the demand outlook used in calculating depreciation. This is elaborated upon in Box 1.

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15 As a clarification, where we use the term "demand" in the text we refer to the demand curve as applied in economics, which is the (downward sloping) relationship between the quantity demanded and the price. Thus, where we say that demand is declining, it is intended to mean that the demand curve shifts inwards, which could lead to the same quantities being sold for a lower price or for fewer quantities being sold for the same price, or a combination of the two.

16 The term "expected" as applied here refers to a mathematical expectation, that is, the weighted average of potential outcomes with the probabilities of each outcome applied as weights.

Box 1 – Reasons for using pessimistic assumptions

The observation that service providers should be permitted to use pessimistic assumptions about asset lives and demand stems from how the revenue requirement is determined. The WACC that the AER estimates is the target for the *expected* return, meaning that any potential to earn less than this should be balanced off by the potential to earn more. If a regulated business is subject to material asset stranding risk, then a situation of net downside risk exists, and so the expected return will be less than the WACC.

Under price regulation, the net downside risk (also referred to as truncation risk) arises because regulated prices are set so that expected NPV=0 for an asset but then prices are periodically revised in light of realised outcomes so that any actual higher-than-expected returns are curtailed by price re-sets, but any actual lower-than-expected returns are not compensated. Where there is material asset stranding risk, use of a statistically expected or probabilistic forecast (as opposed to the minimum plausible forecast) exposes the service provider to an uncompensated risk.

The solution is either to (1) remove the net downside risk or (2) to compensate for the net downside risk.

- Under option 1, the net downside risk is only removed if the regulatory settings permit costs to be recovered in all possible scenarios. However, pragmatism would suggest ignoring scenarios that are very unlikely, and instead to restrict attention to the capacity for cost recovery in all plausible scenarios. This implies using the most pessimistic plausible scenarios of economic life and demand in determining depreciation schedules.
- The alternative – in theory at least – is for a degree of asset stranding risk to be left with the regulated business, but for this to be compensated, with the compensation reflecting the expected loss due to the stranding risk. Compensation could occur through a stranded asset margin incorporated into the rate of return, although this would require changes to the NGR. However, this approach has significant implementation issues. This is because the correct degree of compensation is very difficult to estimate (and the compensation for one pipeline, even if estimated correctly, could not simply be applied to another), and so this would add a new source of contention to the regime, together with a real risk of regulatory error.

This is especially the case for the gas distribution sector where the energy supply future is subject to such uncertainty that it is typically modelled via different scenarios and each of which has key inputs that are subject to uncertainty. Moreover, the proper action is to act early rather than to wait, recognising the fundamental asymmetry in outcomes. The potential downside from acting early is that costs are recovered more quickly than what turns out to be necessary, but this cannot result in an over recovery because the future RAB will reflect the full extent of capital recovery permitted in past period (and, indeed, the period and profile of cost recovery can be revised at future periods – and potentially extended – as new information arrives). In contrast, the longer that action is delayed the more likely it becomes that the constraints applied by competition (either directly or as encouraged by government policy measures) make it impossible to recover costs in full, even if all regulatory constraints were removed.

In our view the best means of ensuring that appropriate forecasts are applied in the calculation of depreciation is to implement a decision-making model allow the service providers to decide these parameters (as addressed below).

Alternatively, or as well, key terms could be defined in the rules, or additional guidance could be provided in the rules. Appropriate additional guidance could be:

- To define "economic life" (a term used in the rules) for an asset or group of assets as the minimum period in years, reasonably derived, from the current time over which operation of the assets or group of assets will be commercially viable under all plausible demand outlooks, where commercially viable means that the assets return revenues sufficient to sustain operation.

- To ensure that the prospects for cost recovery when determining the depreciation method are evaluated using assumptions that are consistent with a lowest, plausible outlook for cost recovery. For example, the guidance could require cost recovery to be tested using forecasts that reflect the most adverse (i.e., lowest or highest, as relevant), plausible outlook for key inputs, reasonably

derived, over the economic life of the assets, with "key inputs" including such matters as demand, the drivers of willingness to pay (such as the price of substitutes) and government policy decisions.

The decision-making model

The AEMC's analysis makes a compelling argument for the rules to permit the service providers to nominate the regulatory depreciation (i.e., Option B).

- The AEMC has concluded that service providers have the incentive and are in a better position than regulators to make optimal decisions in depreciation schedules of balancing the risk of earlier customer exit with higher depreciation (and higher gas prices) against the risk of capital value at future risk of stranding, in situations where there is asset stranding.[17]

- We also hold that service providers have the incentive to make optimal decisions for depreciation where there is limited or no risk of asset stranding, balancing considerations of benefits of holding value in the regulatory capital base against risks of stranding, although we consider this to be a moot point in current circumstances where we consider asset stranding risk can be assumed for all pipelines and networks.

Moreover, if Option B were not considered achievable, then the AEMC's analysis makes a strong case that the NGO and Reference and Pricing Principles would be best achieved from regulators having limited discretion to enforce an alternative depreciation schedule, consistent with the AEMC's Option C(i) for the decision-making model.

We also consider that the AEMC's decision making models B or C(i) are necessary to resist the pressure that regulators may be under to compromise the opportunity for service providers to recover capital to limit near-term increases in prices for gas consumers.

3.4 Conclusions on depreciation provisions

- The depreciation rules should be premised on accepting the service provider's proposal. The decision-making model for depreciation should be one of no or limited discretion for the regulator (i.e., the AEMC's Options B or C(i)).

- Clear objectives for a depreciation schedule should be established, consistent with the NGO and Revenue and Pricing Principles and with clear relevance to a declining gas market:

  – maintaining a reasonable opportunity to recover cost over the remaining economic life of the assets

  – maintaining incentives for the investment in, and efficient use of, pipelines over the remaining economic life of assets, and

  – subject to the above, enabling stability in prices over time given the outlook for demand for services.

[17] Directions Paper, p.70.

- There should be minimal evidence required of stranding risk. Rather than neutral language in relation to future demand, the amended rules could contemplate that all networks are likely to face some risk to future cost recovery, and so identify (as a replacement for the current example of back-ended depreciation) accelerated depreciation as a possible outcome under the provisions. Moreover:

  – the depreciation rules should explicitly allow that a depreciation schedule may front-end depreciation (i.e., allow more depreciation in the current period than future periods) where the service provider perceives a risk to future cost recovery, or

  – alternatively, there could be only a low threshold of evidence of stranding risk before depreciation can be bought forward; that is, that stranding is a real possibility rather than being definitively proven or quantified.

- Key terms could be defined in the rules, or additional guidance could be provided, for example:

  – "Economic life" (a term used in the rules) for an asset or group of assets could be defined as the minimum period in years, reasonably derived, from the current time over which operation of the assets or group of assets will be commercially viable under all plausible demand outlooks, where commercially viable means that the assets return revenues sufficient to sustain operation.

  – Guidance could be provided to ensure that the prospects for cost recovery when determining the depreciation method are evaluated using assumptions that are consistent with a lowest, plausible outlook for cost recovery. For example, the guidance could require cost recovery to be tested using forecasts that reflect the most adverse (i.e., lowest or highest, as relevant), plausible outlook for key inputs, reasonably derived, over the economic life of the assets, with "key inputs" including such matters as demand, the drivers of willingness to pay (such as the price of substitutes) and government policy decisions.

4. Compensation for inflation

4.1 Current rules

Rule 75 of the NGR provides for the regulator to determine how compensation for inflation is achieved in price regulation through the role of the regulator in specifying the revenue model that must be used by service providers.

The revenue models currently specified by the AER and ERA require a real (indexed) method of compensation for inflation of the capital base being indexed for inflation. This method capitalises the annual compensation for inflation into the capital base, which is then recovered over the remaining life of the pipeline. As indicated by the AEMC, this method maintains the value of the capital base in real terms and, in circumstances of stable demand for services, results in a stable revenue requirement and regulated prices in real terms over time. However, in circumstances of declining demand, as this method defers compensation for inflation to future periods it will be a further driver for increasing regulated prices and stranded asset risk (i.e., by increasing the costs that need to be recovered in the future).

The alternative is a use a nominal (unindexed) method that includes the compensation for inflation in regulated revenues (and prices) on an ongoing basis. In circumstances of declining demand this method would allow the compensation for inflation to be recovered in the current access arrangement period and so avoid deferring recovery to the future.

4.2 AEMC's direction and proposals

The AEMC proposes to amend the treatment of inflation to support efficient recovery over time of the compensation for inflation and provide guidance for when it may be appropriate to use the different approaches to inflation. Such guidance could involve setting out the circumstances in which a nominal (unindexed) approach may be appropriate, such as where use of the pipeline is expected to decline over the remaining economic life.[18]

Specifically, the AEMC proposes changes the NGR to:[19]

- introduce a decision point in the rules for how compensation for inflation is to be recovered in an access arrangement period
- provide more guidance on the circumstances in which a real, nominal or other approach to inflation may be appropriate, such as where use of the pipeline is expected to decline over the remaining economic life
- require the service provider to propose an approach and establish that the proposed approach is consistent with the NGO and RPPs, and

[18] Directions Paper, p.75.
[19] Directions Paper, pp.42,74,75.

- Clarify the role of the regulator and decision-making model, with the AEMC indicating it is undecided whether the decision-making model should be one of limited discretion (AEMC Option C(i)) or full discretion (Option C(ii)).

4.3 Our assessment of the AEMC's proposals

The AEMC's discussion of inflation focusses on only one of the impacts of whether the capital base is indexed for inflation and does not consider the interaction between the treatment of inflation and the depreciation method itself.

- The AEMC is correct in pointing out that, for a given depreciation method (and inputs, such as lives etc), having an indexed RAB will imply that more of the cost recovery is deferred to the future compared to a case where the RAB is not indexed for inflation.

- The advancement of cost recovery that is obtained by removing inflation indexation could also be obtained by retaining indexation but changing depreciation (either the method or the inputs to it) to achieve the same revenue; that is, removal of indexation and changes to the depreciation method are substitute measures for advancing cost recovery.

However, whether the RAB is indexed will also affect who bears the risk of inflation being unexpectedly higher or lower than forecast. The traditional rationale for applying inflation indexation to the RAB (and, in parallel, to revenue/prices) is that this provides the regulated business with a hedge against inflation (i.e., if inflation is unexpectedly high, then prices and the closing RAB will factor in that higher rate rather than the rate of inflation that was forecast).

In our view the significance to pipeline service providers of the treatment of inflation under the amended rules will depend upon two factors:

- the changes to the rules in respect of depreciation, particularly the autonomy of service providers to determine depreciation schedules, and

- the preferences of individual service providers of whether the inflation hedge that exists under the real (indexed) approach is valuable.

As the treatment of inflation is about the timing of revenue, if services providers have autonomy over depreciation schedules, the treatment of inflation is largely irrelevant – regardless of the treatment of inflation, a service provider can achieve the same time path of revenue and capital base value through the depreciation schedule. However, the choice of treatment of inflation is important if the amended rules do not provide autonomy to service providers to determine depreciation schedules and the AER retains the ability to limit, relative to service provider proposals, the extent to which depreciation may be brough forward. In the latter circumstance, the ability of service providers to elect a nominal (unindexed) approach to the treatment of inflation provides a second means of bringing revenue and depreciation forward and therefore of managing standing risk.

On the second matter of the inflation hedge, the real indexed approach compensates for inflation based on actual (outturn) inflation. That is, the capital base is escalated for actual inflation. Conversely, the nominal approach compensates for inflation based on the forecast of inflation for an access arrangement period that is incorporated into the rate of return. Service providers bear the risk of actual inflation during an access arrangement period being different to the forecast, with this being

a downside risk where actual inflation turns out to be greater than the forecast. The preferences of service providers for the inflation hedge in the real indexed approach may vary among owners and investors.

4.4 Conclusions on inflation provisions

- The decision-making model for the treatment of inflation should be one of no discretion (i.e., the AEMC's Option B) or limited discretion (Option C(i)).
- Clear objectives for the treatment of inflation should be established, consistent with the NGO and Revenue and Pricing Principles:
  - maintaining a reasonable opportunity to recover the compensation for inflation over the remaining economic life of the assets
  - encourage efficient use of the pipeline or network, and
  - encourage stability in prices over time
- The rules for the treatment of inflation should not mandate either a real indexed method or a nominal method but rather should be premised on accepting the service provider's proposed treatment.

5. Redundancy

5.1 Current rules

Rule 85 of the NGR provides for an access arrangement to include mechanisms for:

- reducing the capital base in circumstances where identifiable assets cease to contribute in any way to the delivery of pipeline services
- sharing costs associated with a decline in demand for pipeline services between the service provider and users.

Constraints on the reduction of the capital base by either mechanism are that:

- the access arrangement must already include the relevant mechanism before it can be applied in a future access arrangement period
- before requiring or approving a mechanism under this rule, the AER must take into account the uncertainty such a mechanism would cause and the effect the uncertainty would have on the service provider, users and prospective users, and
- the drafting in the rules does not appear to permit the AER to mandate a mechanism to adjust the capital base for partial redundancy of assets (this seemed to be a change from how the provisions were originally represented in the National Gas Code).

Rule 86 of the NGR allows for assets made redundant to be added back to the capital base together with an accumulated rate of return from the time of removal from the capital base, if

- the assets again contribute to the delivery of pipeline services
- the value of the assets to be added back to the capital base satisfies the tests for new capital expenditure.

5.2 AEMC's direction and proposals

The AEMC proposes changes [to the NGR] to:[20]

- allow the redundant assets provisions of the rules to be used where required to replicate what would occur in a competitive market
- allow the regulator to remove partial redundant capital (i.e., a value attributed to under-utilisation of assets) from the capital base, subject to mandatory considerations and constraints in the rules, including a materiality threshold (AEMO refers to full redundancy with an implication of identified unused assets and partial redundancy when assets are underutilised)
- replace the access arrangement redundant capital mechanism with a rules-based mechanism

[20] Directions Paper, pp.42,75,76.

- amend the re-use of redundant capital provisions to provide for appropriate tests for the re-use of both full and partial redundant capital, and

- clarify the role of the regulator in requiring partial redundant capital to be removed from the capital base, including clear constraints on the regulator's ability to do so.

The AEMC states that its proposed changes to rules governing asset redundancy will allow for the following outcomes.[21]

- Service providers and/or the regulator to remove partial or fully redundant capital from the capital base when it becomes clear stranding cannot be averted (i.e., the service provider is unable to recover a full return of and on capital) and it is necessary to respond to competition, or otherwise replicates what would occur in a workably competitive market:

  – including allowing the regulator to require partial redundant capital to be removed from the capital base

  – but "clear constraints" on the ability of the regulator to do so, including that

    - the service provider has already been given a reasonable opportunity to recover its capital costs (e.g. through accelerated depreciation), and

    - the use of the partial redundancy tool would reduce the stranding risk of remaining capital, and/or it is necessary to respond to competition from alternative energy sources, or it otherwise replicates what would occur in a competitive market.

- If the conditions for using the tool are met, and the regulator has decided that partial redundant capital should be removed, the rules could state that:

  – where the service provider has elected to use this tool, the regulator must use the amount proposed by the service provider, unless it considers an alternative amount would be more consistent with the NGO and RPPs, and

  – where the regulator has determined to use this tool, the rules could require the regulator to have regard to the forecast cost of providing the services, the price of competing energy sources or pipeline services, the NGO and revenue and Pricing principles.

- The regulator to add any redundant capital back into the service provider's capital base if it later becomes clear it can be recovered:

  – For full redundant capital, applying the same test as the current rules (new capital expenditure test)

  – For partial redundant capital, a test linked to demand because the asset is underutilised but still contributing to the provision of services, rather than ceasing to contribute in any way.

A key assumption behind the AEMC's view that the regulator should have greater discretion as to whether to impose partial redundancy (i.e., greater discretion compared to what the AEMC proposes

[21] Directions Paper, pp.41,75.

for the regulator in relation to depreciation) is that service providers will not have a strong incentive to use the redundancy provisions, even when it is consistent with the NGO and RPPs, because it would result in the capital base being effectively written down.[22]

5.3 Our assessment of the AEMC's proposals

Conceptual misunderstandings: physical vs economic stranding

Unlike the AEMC's assessment and proposals for depreciation and inflation, we consider that the AEMC misconstrues service-provider incentives and the purpose of a redundant capital mechanism. Consequently, we consider that the AEMC's proposals risk creating provisions that are contrary to the NGO and Revenue and Pricing Principles.

The central issue being dealt with by the AEMC in the current rule change proposals is that of *economic* stranding of assets. That is, where competition from electricity limits the ability of service providers to charge prices (i.e., regulated service tariffs) that include a full recovery of capital. The capital value that is unable to be recovered is stranded. Notably, it is capital value that is stranded rather than physical assets: pipeline assets may remain in use, including at potentially at high levels of service demand, but this is only maintained by the service provider charging prices below the full-cost-recovery level. This is distinct from physical asset stranding which refers to a physical asset or part of a pipeline or network becoming unused before the capital cost is fully recovered.

While economic asset stranding and physical asset stranding may both occur, this need not be the case.

- It may be the case that the market for an asset disappears before the end of its technical life, and so the network ceases operation. However, if the physical stranding event had been foreseen as a real possibility, and cost recovery had been advanced in preparation, then no economic asset stranding may occur.

- Equally, the network operator may respond to competition by lowering prices and even converting a network to an alternative fuel, which may be prudent and efficient acts, and the network may continue to be used in a physical sense. However, even though the network continues to be used, it may nonetheless be impossible to recover its prudently and efficiently incurred costs (i.e., its capital base) given the constraints placed on its pricing by competition. This situation would be one where economic asset stranding occurs without physical asset stranding.

The AEMC appears to use to the terms "full redundancy" and "full stranding" to refer to assets being unused and "partial redundancy" or "partial stranding" to refer to a pipeline or network being underutilised and/or capital value being potentially stranded because of declining demand and price competition with electricity.

The AEMC should be clear that it is dealing with the issue of economic redundancy and stranding which are distinct from physical redundancy and stranding. If the AEMC wants to maintain a distinction between physical and economic redundancy, then:

[22] Directions Paper, pp.76-78.

- physical redundancy and stranding should be used in place of the terms full redundancy and stranding to refer to situations where identifiable assets or parts of a pipeline system become unused and, as referred to in the current rules, "cease to contribute in any way to the delivery of pipeline services", and

- economic redundancy and stranding should be used in place of the terms partial redundancy or stranding to refer to situations where capital value is unable to be recovered because of declining demand and/or increasing competition in the energy market that prevents service providers from charging prices sufficient to recover this value.

Where redundancy is a result of decline in gas markets, it is economic redundancy that is the relevant concept. That is, the assets of gas transmission pipelines and networks are likely to remain in use for a substantial period, but the intensity of use will decline along the expected ability to charge prices sufficient for full capital recovery. We expect that instances of identifiable discrete assets becoming unused would be relatively rare at least until gas markets have declined to a point where networks are being decommissioned.

In any case, it is the ability to recover capital cost that is the relevant matter when considering the NGO and Revenue and Pricing Principles: redundancy is the simple question of whether prices for services can be sustained at levels sufficient for capital recovery.

Accordingly, we consider that the distinction between full and partial redundancy (or physical and economic redundancy) distracts attention from the core issue of whether capital value can be recovered. Abandoning this distinction and dealing solely with the concept of economic redundancy would clarify the debate and avoid confusion of whether redundancy is considered in physical or financial terms and align consideration of redundancy with the terms of the NGO and the Revenue and Pricing Principles.

Proposed provisions for redundancy are at best of no value and at worst a significant risk to capital recovery

The AEMC is proposing to develop rules to deal with partial redundancy (i.e., economic stranding) where these rules will at best serve no purpose in terms of the NGO and Revenue and Pricing Principles. Indeed, rules along these lines may be contrary to the NGO and Revenue and Pricing Principles if the new rules establish a power for regulators to remove value from the capital base in a manner that actually creates redundancy. The particular risk in this regard is that a regulator may make capital value redundant to constrain service prices to a targeted "switching price" in circumstances where the service providers is still able to sustain higher prices.

The existing redundant asset provisions of rules 85 and 86 were never intended to deal with the *economic* stranding of networks. This is simply because if a pipeline is subject to *economic* stranding then the removal of value from the regulatory asset base (through exercise of redundancy provisions) has no effect on pricing because regulation is not at that point operating as the pricing constraint Rather, it is competition from substitutes (i.e., electricity) that is the constraint on a network's pricing.

The original rationale for the capital redundancy provisions described the issue that the original gas code provisions were attempting to address as follows: [23]

> ***Issue***
>
> *The provisions in the Reference Tariff Principles are intended to prevent un-used or under-used capital from being to be recovered through Reference Tariffs, and thereby replicating the outcomes of a competitive market.*
>
> *This is intended to give the Service Provider the strong incentive to increase the throughput of gas through its system, and to offer discounts to increase system utilisation while maximising the contributions from discount Users.*
>
> *On the other hand, the treatment of un-used or under used capital may create a significant source of market risk in relation to a Pipeline, and that the methodology that is adopted for handling un-used or under used capital should have a sound basis.*
>
> *However, at the same time, the original framers of the Gas Code recognised that compensation would be required for the additional risk that would be caused by such an incentive scheme. To this end, a capital redundancy scheme can only apply on a forward-looking basis, and the regulator is required to consider the implications of the uncertainty – risk – created by this scheme when making its other decisions.*

There may be cases where it is no longer possible for costs to be recovered – for example, where the stranding event was not foreseen sufficiently in advance for earlier capital recovery (for example, a change in consumer tastes and/or a change in the price of a competitor caused a substantial decline in revenue). However, the correct regulatory response at this point of economic stranding would be to remove price controls (and so to permit the business to price as it sees fit), in view of competition having made price regulation redundant.

The AEMC contemplates a role for the regulator in making capital value redundant where it is likely to become stranded:[24]

> *If it becomes apparent that a gas distribution network (or parts of the network) will likely become stranded, then timely use of the redundant capital tool can help to:*
>
> - *mitigate the impact of escalating consumer bills for those customers that remain connected to the network*
> - *reduce the stranding risk of the remaining capital if the lower bills result in customers staying connected to the network for longer.*

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[23] Gas Reform Task Force (1996), Information paper to accompany the exposure draft of the National Third Party Access Code for Natural Gas Pipeline Systems, August, p.60. Note that while the discussion of the "issue" in this text suggests that the removal of redundant assets would be automatic (which was consistent with the Exposure Draft of the Code that was released for consultation in August 1996), the final version of the Gas Code stepped back and provided the flexibility to create a capital redundancy scheme, but did not require such a scheme.

This contemplated role of the regulator in making capital redundant derives from two misconceptions on the incentives of service providers.

First, the AEMC states that service providers do not have an incentive to identify assets/value as redundant. This is not the case. Asset value that is unrecoverable is effectively written down in any case.

Secondly, the AEMC reasons that by making part of the value of the capital base redundant it will reduce regulated service prices and thereby assist in maintaining demand for pipeline services, keeping the pipeline in operation and promoting the interests of consumers by maintaining continuity of services and keeping customers connected to networks for longer.[25] This implicitly assumes (incorrectly) that service providers would charge regulated prices regardless of market circumstances and not follow the commercial and economic incentives to set prices below regulated prices to maximise cost recovery in the face of market competition.

It follows that introducing partial redundancy (or economic redundancy) provisions into the NGR would not actually serve any purpose in terms of efficiency of pricing, cost recovery by service providers or the interests of consumers. At best, the value made redundant and the consequent impact on regulated price would just reflect the asset stranding already realised and the service prices that the service provider is already offering.

Turning to the potential risks of a regulator having an expanded capacity to make capital redundant, we see two problems.

First, the AEMC's contemplated role of the regulator in making capital redundant appears to be a customer-protection initiative premised on the view that service providers would not already have reduced service prices to levels necessary to retain customers where efficient to do so; that is, that the price levels necessary to retain customers are at least sufficient to recover avoidable costs of service provision. Decisions of the regulator are not necessary to prompt service providers to make efficient pricing decisions, as discussed already above. It follows that a regulatory decision to make capital redundant, and so cause regulated prices to be lower than the regulated business would otherwise determine, would imply that the regulator thinks an amount of capital value is not recoverable while the service provider holds a view that it is. Making capital value redundant in this circumstance would be directly contrary to the service provider having a reasonable opportunity to recover costs under the Revenue and Pricing Principles.

Secondly, a role for the regulator to make capital redundant would raise substantial practical implementation issues. The AEMC contemplates partial redundancy to reduce the capital base such that the regulated prices are consistent with a "switching price" to electricity, which would be the prices expected where the service provider is constrained by market competition. In practice it would be difficult to the point of impossibility to estimate a switching price for gas and a corresponding net back price for pipeline services. Gas consumers are likely to vary widely in terms of the gas prices that might motivate a switch to electricity due to factors such as the extent to which gas and electricity are seen as perfect or imperfect substitutes (i.e., the value that may be placed on gas or electricity as a favoured energy source), consumer incomes and sensitivity to energy prices, and the importance of coincidence of timing of energy source decisions with appliance purchases or replacement. That is,

[25] Directions Paper, p.55.

there is a demand curve for gas (and therefore network services) that is affected by the availability of electricity as a substitute source of energy rather than a single switching price.

It would be inappropriate in these circumstances for a regulator to be tasked with determining an amount of the capital base to a redundant simply based on equating a pipeline service price with a netback switching price.[26] Imprecision (and therefore errors) of regulators in estimating economic stranding and making redundancy adjustments to the capital base risks "overshooting" actual economic stranding with consequent risks for service providers in cost recovery and disincentives for new investment.

"Revealed redundancy" is the relevant concept

If provision is to be made in the NGR for partial redundancy, this is only practical as an ex post measure. That is, where pipeline service prices are observed to be less than regulated prices a redundancy adjustment is made to the capital base to reduce regulated prices to correspond to observed prices.

Observed prices for pipeline services in the presence of meaningful competition from electricity are in effect "revealed switching prices" as the prices set by service providers with a view to customer retention and maximising long term cost recovery. Unlike regulators, service providers can use market intelligence and learning through "trial and error" in setting prices to respond to market competition, and in any case have a very strong incentive to set prices to maximise the prospects of capital recovery.

The implied loss of capital value where service prices are observed to be below regulated prices is an amount of redundancy revealed by market outcomes.

There are better mechanisms than redundancy to protect the interests of customers

If the AEMC is concerned about customer protection, particularly protection of customers unable to readily switch away from gas, there are better mechanisms than the redundant capital to deal with these concerns.

First and foremost, networks will set prices that are intended to retain their "footloose" customers, and the benefits of this competition with electricity will flow through to all customers. This is because the gas networks do not price discriminate between customers (at least at the residential and commercial level), and do not have the practical capacity to do so. Outside of the access regulation framework it would be open to government to implement customer protections when this becomes necessary (e.g., when the loss of customers has been such that the bulk of remaining customers face barriers to switching) through retail price regulation for gas or direct assistance packages, which most likely would be at time when a more comprehensive decommissioning plan would need to be contemplated.

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[26] It would also be very difficult for a regulated business to derive the redundancy-minimising price with any precision, although the regulated business would have access to greater information than the regulator. However, one would expect that as the stranding risk becomes more pressing, regulated businesses would observe how price changes affected demand and so arrive at an approximately optimal price via trial and error.

Having regard to these three matters, we consider there to be no merit in creating a regulator-driven stranding risk for gas networks at this present time, given the real-life standing risk that now exists.

A potential advantage of partial redundancy provisions to service providers

There may still be some advantage to service providers in having a partial redundancy mechanism in the NGR, subject to this being at the initiative of service providers.

The advantage is that a partial redundancy mechanism could allow service providers to "park" economically stranded value in a redundant asset account. If gas market conditions turn out to improve (however unlikely), this value could be added back to the capital base with an accumulated rate of return. The alternative in the absence of a redundancy mechanism is that value of economically stranded value is left in the capital base and continues to depreciate in regulatory accounts even though the depreciated value is not fully recovered. The lost value is then not recoverable should market conditions improve.

For a partial redundancy mechanism to have these potential benefits to service providers, the mechanism would have to include:

- capital stranding and redundancy defined as an economic concept and in financial terms; that is, in terms of financial value that is unrecoverable
- the tests of redundancy and for adding back to the capital base being consistent with the concept of economic stranding: value is made redundant if it is unrecoverable and value can be added back to the capital base if it becomes recoverable, and
- capital redundancy at the initiative of the service provider.

We observe that there are other mechanisms that could be applied to permit a service provider "park" unrecovered cost in order to provide the opportunity for recovery in the future if conditions improve. One mechanism would be to simply allow the portion of total revenue (i.e., the cost of service) that cannot be recovered to be placed into a fund and carried forward at the rate of return. Mechanisms to carry-forward an under- or over-recovery of the cost of service have been applied in many other regulatory regimes, albeit for different purposes. These mechanisms include: the carry-forward (wash up) accounts that are applied to correct for under- or over-recovery whenever a revenue cap form of price control is applied, the "deferred revenue" account as applied to the Western Australian electricity networks, and the "wash up" accounts that are applied for a variety of reasons for the NZ regulated businesses.[27] The AEMC could also give consideration to the merits of such an alternative mechanism for "parking" unrecoverable costs relative to the option of a partial redundancy mechanism.

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[27] Our initial thinking is that the service provider would have the option to nominate the forecast quantum of unrecoverable cost for the next access arrangement period during an access arrangement review, and the unrecoverable amount would then be placed into the separate account and not be factored into the calculation of reference tariffs. The same process would be reapplied for future access arrangement reviews (assuming the network remains subject to full regulation). Similarly, the network could nominate drawing down upon some of the parked capital at a future review of reference tariffs, which it would presumably only do if the amount was considered recoverable. However, the practicality of such a mechanism would need to be confirmed.

5.4 Conclusions on redundancy provisions

- Capital redundancy should be at the discretion of the service provider, recognising the strong incentives of service providers to monitor and park unrecoverable capital in a redundant capital account, and the substantial risk to investment incentives of regulator-initiated redundancy. The decision-making model should be one of no discretion (i.e., the AEMC's Option B) or limited discretion (Option C(i)).

- Capital redundancy (particularly partial redundancy) should be considered as an economic concept and in terms of financial redundancy (i.e., a dollar amount of the capital base that is unable to be recovered) and not physical redundancy (i.e., specific identified assets or proportions of the value of assets related to declines in service quantities or underutilised capacity).

- The distinction between "full" and "partial" redundancy could be abandoned.

- Clear objectives for capital redundancy should be established, consistent with the NGO and Revenue and Pricing Principles.

  – Adjustment of the value of the capital base to align with the ability of the service to recover capital costs in prices for pipeline services under prevailing market conditions.

- The objectives for capital redundancy should not encompass the protection of vulnerable customers in periods towards the end of pipeline lives.

  – Additional customer protection is less necessary in the short to medium term as the benefits of networks competing and pricing for customers likely to switch will flow through to all.

  – In addition, even once customer protection may be warranted (e.g., when a majority of customers face barriers to switching), better mechanisms exist, such as through retail gas price regulation, or targeted government assistance to vulnerable customers.

- Capital redundancy should be considered only in ex post terms as "revealed redundancy"; that is, when it is observed that service prices during the last Access Arrangement Period were being set by the service provider at levels below the regulated prices and therefore insufficient to recover all capital costs, and that this practice is reasonably expected to continue (i.e., the discount against the regulated price caps was not a consequence of transitory factors).

  – To the extent that the AER is given the power to impose partial capital redundancy, then this should only be permitted based on "revealed" redundancy (i.e., the observation that the service provider has been setting prices systematically below the regulated price caps, and where this is reasonably expected to continue).

- Simple criteria should be established for removal of value from the capital base and adding-back value to the capital base consistent with concepts of financial redundancy:

  – value removed from the capital base when in is not recoverable

  – value added back to the capital base when it is recoverable

– for the amount that is "parked" in the partial redundancy account to be carried forward by the regulatory WACC.

6. Reference tariffs

6.1 Current rules

Under Rule 94 of the NGR, reference tariffs are determined by an allocation of total revenue to customer classes (tariff classes) and to component charges of reference tariffs applying to each tariff class.

94 Tariffs – distribution pipelines

(1) For the purpose of determining reference tariffs, customers for reference services provided by means of a distribution pipeline must be divided into tariff classes.

(2) A tariff class must be constituted with regard to:

(a) the need to group customers for reference services together on an economically efficient basis; and

(b) the need to avoid unnecessary transaction costs.

(3) For each tariff class, the revenue expected to be recovered should lie on or between:

(a) an upper bound representing the stand alone cost of providing the reference service to customers who belong to that class; and

(b) a lower bound representing the avoidable cost of not providing the reference service to those customers.

(4) A tariff, and if it consists of 2 or more charging parameters, each charging parameter for a tariff class:

(a) must take into account the long run marginal cost for the reference service or, in the case of a charging parameter, for the element of the service to which the charging parameter relates;

(b) must be determined having regard to:

(i) transaction costs associated with the tariff or each charging parameter; and

(ii) whether customers belonging to the relevant tariff class are able or likely to respond to price signals.

(5) If, however, as a result of the operation of subrule (4), the service provider may not recover the expected revenue, the tariffs must be adjusted to ensure recovery of expected revenue with minimum distortion to efficient patterns of consumption.

6.2 AEMC's direction and proposals

The AEMC proposes providing 'additional guidance" to service providers and regulators in setting reference tariffs:

> *... we consider that additional guidance to the service provider and the regulator could help them design reference tariffs and tariff variation mechanisms that better promote the long-term interests of gas consumers under a broader range of demand scenarios.*[28]

In particular, the AEMC proposes to introduce an interpretation of "stand alone cost" as an amount of cost determined with reference to the estimated value of the switching price at which members of a tariff class would reasonably switch to another energy source.

The AEMC sets out its interpretation of the stand alone cost upper bound limit as follows:[29]

> *The rules note that the revenue a service provider expects to recover for each tariff class through reference tariffs should not be higher than stand alone costs, that is the costs the service provider would incur, were the network only to supply those customers. If a service provider set reference tariffs above the standalone costs this could create:*
>
> - *incentives for some customers to seek alternative supply options (increasing the risk of revenue under-recovery)*
> - *unfair impacts on customers that are unable to access alternatives*

The AEMC then sets out how it thinks the calculation of stand alone cost may need to change to meet these objectives – but especially around the latter of these objectives – as follows:[30]

> *Uncertain and declining demand will have implications for the standalone cost methodologies and how this boundary is used in tariff setting. For example, instead of the calculation being based on an alternative hypothetical network, it could be more relevant to base standalone cost estimates on the cost at which members of a tariff class would reasonably switch to another energy source. This would effectively set the upper bound for reference tariffs at a lower point compared to what it is under current methodologies for standalone cost. This may be appropriate in some demand scenarios (for example a declining demand scenario) ensuring that customers in relevant tariff classes are not facing prices that encourage early exit from the network.*
>
> *Theoretically, there could be merit in removing reference to an upper bound as competition from alternative energy sources may provide a natural upper bound. However, we consider the upper bound serves as an important safeguard for those customers who face financial, technical or other barriers to switching and will ensure consistency with the proposed direction on capital cost recovery.*

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28 Directions Paper, p.22.
29 Directions Paper, p.121.
30 Directions Paper, p.122.

The key observations of the AEMC in the passage above is that the stand alone cost should:

- be calculated with reference to the *price of a substitute technology*, rather than with reference to the *cost of supplying the service using a gas network* (and specifically, the stand alone cost of doing so), and

- be calculated in a manner that is intended to ensure that the benefits to consumers from competition with the alternative energy source (electricity) flowed through to all consumers, irrespective of whether they were physically able to switch.

Moreover, the AEMC advocates setting the estimate of the switching cost at a hypothetical rate that would likely be below the level at which switching in real life were likely to occur:

> *Calibrating the standalone cost to a level at which a consumer that faced no impediment to switching would reasonably switch to an alternative energy source would protect those consumers who remain connected to the network from paying prices in excess of what would prevail in a workably competitive market. That ceiling reflects the credible exit option of consumers who can leave and, in doing so, constrains prices for others within the same tariff class that may find it more difficult to do so. The broad application of tariff classes, primarily grouping customers by use and consumption level rather than by their capacity to switch, should protect those consumers with lessened ability to access alternative energy sources.*

6.3 Our assessment of the AEMC's proposals

In short, we consider that the AEMC:

- has adopted an interpretation of the "stand-alone cost upper bound" constraint for tariff setting that differs from its intended purpose

- proposes to change how the constraint operates in a manner that is inconsistent with the operation of the upper bound constraint in other sectors that face competition

- proposes to introduce into the scheme of reference tariff determination a disconnect between the determination of total revenue (that is determined with reference to costs) and the determination of reference tariffs (currently determined with a view to recovery of the total revenue)

- in so doing, increases the risk to cost recovery in total contrast to the proposed changes to the depreciation provisions of the NGR that seek to reduce this risk, and

- does not fully recognise the inconsistency of the proposal with the NGO and Revenue and Pricing Principles.

The AEMC also overstates the likelihood of consumers that cannot switch being "left behind" – networks will compete to retain the footloose customers, and the benefits of this competition will flow through to all.

The purpose of the lower / upper bound constraints (and the upper bound especially) are mischaracterised

The AEMC's proposals for how the stand alone cost limit should be changed would be an idiosyncratic application of the stand alone cost limit to prices that is not, in our view, consistent with the theoretical basis for the limit, nor with how the limit is applied in other sectors.

The purpose of the lower and upper bound limit to the revenue (not price) that is able to be recovered from a class of customers is just to ensure that there are no groups of customers subsidising another group of customers; that is, one group making an unreasonably low contribution to cost recovery that is made up by another class of customers making an unreasonably high contribution to cost recovery. The cost that could be avoided by no longer serving one class sets the lower bound (i.e., bearing none of the economic common costs), and the cost at which a class could be served without serving anyone else (i.e., having to bear all of the economic common costs) sets the upper bound. The presence of economies of scale and scope means that there is ordinarily a large range between the lower bound and upper bound cost limits.

Importantly, the lower bound and upper bound cost concepts refer to the service provider's costs. The cost structure or price of a competitor service is never part of the calculation.

Moreover, the emergence of competition for gas pipeline services does not mean that a change is required to how the lower and upper bound limits are conceived. These limits to revenue recovery were developed for sectors that were facing competition – and, indeed, prior to competition emerging these limits to pricing are likely to be largely innocuous (i.e., if there are no real constraints to the regulated business's ability to recover its costs, then it would have little incentive to allocate costs in an unreasonable manner).

The upper bound constraint of stand alone cost is a nearly 50 year old concept of regulatory economics that is a core concept of regulatory pricing and has an objective of ensuring that a regulated price is free of subsidy across customer groups, as noted earlier.[31] The upper bound is the theoretical price level above which the customer (or particular group of customers) would have the incentive to "go it alone" and provide the relevant service to themselves:[32]

> *Prices cannot be sustainable if they involve any cross subsidy…. Quite simply, if the revenues collected from the sale of a subset of products … exceed the cost of providing the same quantity of those products independently, a profitable entry opportunity is offered to anyone willing to supply the same bundle at a slightly lower price and, in a perfectly contestable market, entry will occur…. Equilibrium in perfectly contestable markets requires that the revenues earned on any part of the total output of the industry be no more than the stand-alone production cost of that part.*

The original rationale for the lower/upper bound constraints was that when competition emerges, the strength of that competition may be different across different services. For example, in telecommunications services competition in long distance telecommunications was more feasible than

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31 Faulhaber, Gerald R., "Cross-Subsidization: Pricing in Public Enterprises," *American Economic Review* 65 (1975), 966-77. Baumol, William J., Panzar, John C. and Willig, Robert D., 1982, *Contestable Markets and the Theory of Industry Structure*. Baumol, William J. and Sidak J. Gregory, 1994, *Toward Competition in Local Telephony*, AEI Studies in Telecommunications Deregulation MIT Press

32 Baumol Panzar and Willig, pp.351-352, 354.

competition in local telephony, and in railway services competition may be more feasible on some track segments or for some cargoes than others. Accordingly, the concern in regulatory policy was that a regulated business facing this competition would price down to meet the competition where it was most effective, and to make up the shortfall from raising the cost recovery from the class of customers where competition is less effective. The lower/upper bound constraints were introduced to place bounds around how much of a redistribution in cost recovery was allowed to occur.

Importantly, the purpose of the revenue limits has never been to ensure that the benefits of competition were passed on to all consumers in a class – it is the presence of competition that is expected to pass on the benefits of competition to all customers, irrespective of whether or the customers switch to substitute services.

The AEMC's proposal is inconsistent with the scheme of price regulation

The scheme of price regulation established under the NGR involves determination of a "total revenue" requirement as the forecast costs of service provision by a building block calculation and then allocation of this revenue requirement to reference services and reference tariffs (which is the subject of Rule 94). Reference tariffs are determined such that the revenue requirement will be met given the forecast of demand for reference services.

Imposing a cap on reference tariffs by reference to a switching price (which is unrelated to a service providers costs) is contrary to this scheme of regulation and would most likely result in the setting of reference tariffs at levels insufficient to recover costs. This is inconsistent with the NGO and Revenue and Pricing Principles.

The AEMC's proposal would substantially increase stranded asset risk and be very difficult to implement

An immediate effect of the AEMC's proposals is that regulators under the NGR would be given a new tool to apply price caps for sub-groups of consumers based on the regulator's judgement about the switching price and without regard to cost. This would likely constrain the networks' abilities to recover costs.

Moreover, the upper bound limit with reference to stand alone cost is not a limit on individual prices, but rather refers to the total revenue recoverable across a group of customers. Deriving the upper bound with reference to a switching price would be extremely complex given the variation across customers within a class in characteristics like appliance types and operation.

The AEMC's concern should be addressed by a different tool

At the heart of the AEMC's concern is that there may be customers that cannot switch for various reasons and so will not benefit from the emerging competition with electricity. We consider this concern to be unwarranted, at least in the short to medium term, as we have already discussed earlier, and better met using different tools in the longer term.

- In the short to medium term, all customers will benefit from the competition from electricity because the networks will be trying to retain customers and have no practical ability to price discriminate. That is, customers will not need to switch in order to obtain the benefits of competition, rather the process of competition will encourage these benefits to be provided to all.

- While there might eventually be a time that where the network's incentives may change once most footloose customers have switched, this is likely to be towards the end of the economic life of a network when the customer base is so low that the continued viability of the networks is becoming stretched. Accordingly, if price constraints are to be introduced at that time, this may need to be accompanied with financial assistance to customers and/or networks and potentially also a decommissioning plan. That is, measures to provide electricity prices to gas consumers will need to be part of a larger policy and regulatory approach to the end of life of gas networks.

6.4 Conclusions on reference tariff setting

- The AEMC should not progress the proposal of an interpretation of stand alone cost as a switching price and for the purposes of imposing a constraint on reference tariffs that is unconnected from the service provider's costs.