the australian PIPELINE industry association Ltd

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Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Submitted via AEMC online form

Rule Change Proposal GRC0013

Dear Commissioners

The Australian Pipeline Industry Association (APIA) welcomes the opportunity to comment on rule change proposal GRC0013 made by the Major Energy Users Inc (MEU).

It is APIA's view that the proposal ignores, for whatever reason, the existing provisions of the National Gas Rules, which are more than adequate to address the perceived issues raised by the MEU and have been used by regulators in previous decisions. APIA's position is expanded further in the attached submission.

We are happy to discuss our submission with the Commission as required. If further information would be useful, please contact me on (02) 6273 0577 or sdavies@apia.asn.au.

Yours sincerely

STEVE DAVIES
Policy Adviser

the australian PIPELINE industry association Ltd

Submission to Rule Change Proposal GRC0013: Optimisation of the Regulatory Asset Base and Use of Fully Depreciated Assets

The Australian Pipeline Industry Association (APIA) welcomes the opportunity to contribute to the Consultation Paper released by the Australian Energy Market Commission (AEMC) in response to the proposed changes to the National Gas Rules made by the Major Energy Users Inc (MEU).

APIA is the peak industry body representing Australia's gas transmission sector. APIA's membership is predominantly involved in high-pressure gas transmission. APIA's members include contractors, owners, operators, advisers and engineering companies and suppliers of products and services.

APIA's members own, operate and service the gas transmission infrastructure that supply the gas market and are likely to be the key investors in new pipelines and capacity expansions of existing pipelines that will be required over the next 20 years and beyond. This investment in transmission pipeline infrastructure will be essential to Australia's economic growth and will contribute to the reduction of Australia's greenhouse gas emissions.

In making this submission, APIA is putting forward the agreed view of the owners of regulated gas transmission infrastructure in Australia.

The MEU's proposal is to modify both the National Electricity Rules (NER) and the National Gas Rules (NGR) such that the regulator will be required to optimise the regulatory asset base and force the use of fully depreciated, but still useful, assets. In the MEU's words the proposal requires:

1. Optimisation of assets
When assessing the regulatory asset base (RAB), the regulator shall review the valuation of all assets to ensure that the value of the assets used in the building block approach reflects the minimum value necessary to ensure the provision of the services required.

2. Continued use of fully depreciated assets
When approving a replacement for an asset that has been fully depreciated, the regulator must ensure that the asset to be replaced has passed its useful life and cannot be used productively for further service.

APIA has two primary concerns with this proposal. Firstly, it is APIA's view is that the proposal is ill-considered, without sound foundation and is potentially dangerous. MEU has made the proposal without factual evidence that demonstrates that there is a problem. Moreover, there is lack of analysis of costs, uncertainties and the incentives created by the proposed changes. All of this demonstrates a lack of understanding of the current application of the rules, the way service

providers do business and the likely impact of the proposal on both services providers, the AER and end users.

Secondly, if this rule change proposal is implemented, it will create further incentives for in efficient under-investment, through suboptimal sizing of pipelines, designed only for current demand, and through increased perception of regulatory risk that acts either as a deterrent to further investment or increases the cost of financing existing investment.

APIA will address the proposal in so far as it relates to changes to the NGR. The NER and NGR have different mechanisms currently in place, however the fundamental problems with the proposal are relevant to both electricity and gas.

The submission will:

1. respond to some of the MEU's stated reasons for the proposed rule change;
2. respond to specific aspects of the proposed drafting changes to the NGR; and
3. then address the questions posed by the AEMC in the Consultation Paper.

1. Response to MEU's reasons for the Proposed Rule Change

It is APIA's submission that the MEU's proposal is ill-considered and without sound foundation and should be rejected by the AEMC. In particular, the MEU has:

a) failed to produce any evidence that the perceived problems are actually occurring under the NGR. In particular there is no evidence that there current access arrangement reviews, or the Rules that govern them, have resulted in assets which are still economically efficient to operate being replaced;
b) made assertions that are, in fact, in some cases wrong in so far as the National Gas Rules are concerned – in particular, the NGR already has mechanisms addressing many of the issues the MEU has relied on as justification for the rule change proposal;
c) based much of its argument on the need for regulation to replicate a competitive market. This is not a requirement of the National Electricity Objective or the National Gas Objective;
d) ignored the previous decision of the AEMC on optimisation of the RAB and shows a complete lack of understanding of what would be required to implement the Rule change proposed in respect of network or pipeline optimisation;
e) shows a complete lack of understanding of the economies of scale inherent in network infrastructure and the methods of optimal design;
f) there is no analysis of the incentives that the proposed Rule creates, including incentives to make undersized suboptimal investments and focus on the requirement to undertake a five yearly re DORCing of its asset base, rather than focus on efficient operation of its actual asset base and
g) provided a cursory cost benefit analysis in which the benefits are assertions without concrete evidence and the analysis of the costs is completely lacking.

Before responding to each of the above points, it is important to note that, as advised by the MEU to the public forum held by the AEMC on 23 November 2011 in Brisbane the MEU's proposal had been

made to the Australian Energy Regulator (AER) for inclusion in its Rule change proposal of 3 November 2011. However, The AER did not include these proposals in its rule change proposal. We draw the conclusion that the AER did not agree that these changes are appropriate, otherwise it would have picked them up as a matter of efficient administration.

1.1 Incorrect assertions made by the MEU

There are a number of incorrect assertions made by the MEU in its application document.

Firstly, the MEU claims that there is little or no review by regulators before actual capital expenditure is rolled into the capital base. In so far as the NGR are concerned, this is incorrect.

Under the mechanisms in the NGR, capital expenditure is not only required to be reviewed twice - on an *ex ante* and *ex post* basis – the test to be applied in the *ex ante* process is the same as the test in the *ex post* review. Before any forecast capital expenditure can be accepted for inclusion in the total revenue calculations in an access arrangement, the Regulator must be satisfied that the forecast capital expenditure meets the same test that applies for assessing whether actual capital expenditure should be included. This test requires the regulator to be satisfied on a number of factors outlined in Rule 79. Importantly, Rule 79 of the NGR requires:

- the expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services; and
- the expenditure must fall under one of three limbs:
    - the overall economic value of the expenditure is positive – effectively a cost benefit analysis
    - the expenditure will not cause the reference tariffs to increase
    - the expenditure is required to either comply with meet one of three criteria.

Secondly, the MEU claims that "there is no explicit requirement for an *ex post* assessment to ensure that the costings for the investment…..are the costs actually incurred when the investment is commissioned" (see section 1.4.1 of MEU application). This is not the case in the NGR. Rule 77 requires that the capital base can only be adjusted if expenditure is conforming capital expenditure. Expenditure is only conforming capital expenditure if the regulator is satisfied that it meets the requirements of Rule 79 (see above).

Thirdly, the MEU claims (see section 1.4.1 of MEU application) that there is nothing in the process which imposes a requirement on the service provider to ensure that the investment that it makes is well conceived and executed. Again, this is incorrect. The criteria in Rule 79 makes this an express requirement through the prudency requirement.

While the NGR is relatively untested with respect to access arrangements for gas transmission pipelines, it should be noted that the requirements for *ex ante* and *ex poste* reviews were part of the Gas Code. The main change for the NGR in respect of capex has been the refining of the test for inclusion of capex in the RAB. However, in the case of one gas transmission pipeline that has had its access arrangement assessed under the NGR, the relevant Regulator was required to assess whether[1]:

[1] Economic Regulation Authority assessment of the DBNGP revised Access Arrangement – 2011-2015

- in excess of $1.7 billion of capital expenditure incurred in the period 2005 to 2010 should be included in the capital base as conforming capital expenditure; and
- in excess of $100 million of forecast capital expenditure was conforming capital expenditure.

In that process alone, the Regulator was provided with detailed information on:

- options for the configuration of the expansions to which the expenditure related;
- the prudency of the expenditure;
- the investment decision process; and
- the details of the construction, procurement and design and customer requirements.

There are also similar examples for gas distribution networks with Access Arrangement reviews under the NGR, where similar *ex ante* and *ex poste* reviews of capex have been undertaken by the AER. Significant amounts of information were sought by the AER under RINs to ensure proper assessments and the AER was supported by expert technical advice in making them[2].

Fourthly, there is a claim in the MEU application that there is little or no assessment undertaken by regulators as to whether the assets provided in any new investment are appropriately sized or optimised for the service being provided (see sections 1.1 and 1.2 of MEU application). Again, this is incorrect under the NGR, even in current circumstances where relatively few access arrangements for transmission pipelines have been assessed.

For example, in the case of one pipeline's access arrangement, before the Regulator could be satisfied that expenditure to which a significant expansion related met the criteria, the Regulator undertook (and was provided with) detailed assessments to demonstrate that the expansion only delivered the contracted capacity of the new shippers and that it was configured in the most optimal way.

Fifthly, there is a claim by the MEU that there is no ability for Regulators to remove under-utilised assets. This is not correct. Rule 85(1) of the NGR (capital redundancy) addresses the proposed rule's objective to remove under-utilised assets from the RAB and has been used on at least three occasions in the past under corresponding provisions in the predecessor to the NGR, the Gas Code. One very clear example relates to what was AGL Gas Networks' NSW gas network. In its decision in 2005 IPART[3], the then relevant regulator, applied the redundancy provisions of the Gas Code to reduce the value of AGLGN's high pressure Trunk Main from Wilton south west of Sydney to Wollongong, because it was effectively bypassed by the Eastern Gas Pipeline. In this case there was a very significant reduction in demand (80% approximately), but only required a reduction in pipe size from 350mm to 250mm.

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[2] In particular, the ActewAGL Access Arrangement 2010 – 2015, the Jemena Gas Networks Access Arrangement 2010 – 2015, The APA and Envestra Brisbane Access Arrangements – 2011- 2016 and the Envestra SA Access Arrangements – 2011- 2016

[3] AGL Gas Networks Revised Access Arrangement, Final Decision, IPART, April 2005, pp 77 - 86

More importantly however, to propose the value of under-utilized assets to be automatically removed from the capital base reflects a fundamental misunderstanding of gas pipeline contractual arrangements. Most users of gas transmission pipelines contract on a long term basis. The terms and conditions of the shippers contracts generally do not require users to use their contracted capacity but they do require that the service provider must be able to provide all of the contracted capacity on a daily basis. So, in instances where a user is not using all of its contracted capacity for whatever reason (eg, the user's downstream plant has been shut down for maintenance for a protracted time), under the MEU's proposal, an amount reflecting the value of the under-utilized part of the system would have to be removed from the capital base. Yet, the service provider would be required to make the capacity from this under-utilized part available to the user at any time that it wants to. In these circumstances, the service provider would not be able to recover its investment were the proposed rule change implemented.

Lastly, the concerns raised in the MEU's application seem to be based on the premise that service providers' businesses have an excessive supply of capital to fund inefficient investments that can be profited from under the regulatory regime. This is simply not true. Service provider businesses are constrained by the same capital disciplines as the MEU's members and all businesses in the economy. Raising and refinancing debt is an ongoing discipline and the regulatory system does not offer endless opportunities to receive windfall gains on over-investment in energy infrastructure.

1.2 Re DORCing of Capital Bases is ill-considered

As noted above and in the AEMC's consultation paper, the AEMC has previously considered optimising the RAB. The issue of periodic revaluation of capital bases was also thoroughly debated as part of the ACCC's Draft Statement of Regulatory Principles process in 2006 and dismissed as unfruitful by all parties. This was for good reason, it is fraught with many practical and implementation problems and it became clear that any economic benefits are likely to be minimal and potentially negative.

APIA draws the Commission's attention to the quite considerable debate of this issue over the period of the development of the ACCC's Draft and final Statement of Regulatory Principles. APIA also draws attention to very great degree of consideration and debate around the establishment of initial Capital Bases under the Gas Code for pipelines and gas distribution networks. This should be sufficient for the AEMC to be deterred from brining in a Rule that would require the determination of depreciated optimized replacement costs of pipelines or any other kind of energy network.

More importantly, to re-optimise the entire regulated asset each time further capital expenditure is incurred in relation to it, could result in an entirely different regulated asset being valued. For example, in the case of pipelines, expansions are undertaken progressively over time by a combination of looping and the addition of compression. If an expansion involves the significant looping of a pipeline system, it is most likely the case that, with the benefit of hindsight and a clean slate, if the pipeline's development was recommenced from scratch, the diameter of the original pipe would have been enhanced, so as to defer the expansion by looping. However, this is neither practical nor would it ensure that the regulator has taken into account the key revenue and pricing principles in sections 24(2) and 24(5) of the NGL.

1.3 Optimal sizing of investments in energy infrastructure

The proposal shows a lack of understanding of the very significant economies of scale in energy utilities. For example, when constructing gas transmission pipelines, the construction costs are not relative to the diameter of the pipe being laid. In its submission to the Productivity Commission's Review of the Gas Access Regime in 2004, the Energy Markets Reform Forum noted that increasing a pipeline diameter from 350mm to 450mm at time of construction increases spare uncompressed capacity by 65%, but increases the capital cost by no more than 5%.

It is more economic in the long term (and cheaper for the consumer) to build a larger than required pipeline and have it not reach full utilisation for some time that to build a pipeline sized for existing demand and incrementally expanding it. The result is that the optimal size for a pipeline may be based on demand, which will not be arise for anywhere between 5 and 15 years after the capacity is commissioned, because this results in the lowest long run cost of capacity. Reoptimisation to only allow only current capacity, may result in a smaller diameter pipeline (though probably only one size smaller) and the reduction in the capital base – as demonstrated above - will be minimal.

Despite there being well established procedures for determining the most economic time horizon for sizing a pipe, there can be debates about this that are unproductive. However, the prospect of having a the current level of demand as the basis for sizing a pipeline, will deter an economically efficient sizing and create incentives for a continuing series of suboptimal incremental investments that just provide for the required capacity rather than investment in larger sized pipes that will deliver lower cost energy for consumers.

It is also worth keeping in mind that re DORCing may result in increased RAB values if replacement costs increase at a greater rate than inflation. This can occur because of changes in the construction environment associated with existing infrastructure and general increases in construction costs as have been experienced over the past five years that are associated with the mining boom.

1.4 Regulation does not need to replicate a competitive market

The proposal makes the argument that regulation should replicate a competitive market, and compares the requirements of a regulated energy business with that of a competitive market on multiple occasions. Replication of competitive markets is not considered by either the NGO or the Revenue and Pricing Principles (RPP). The NGO and RPP are concerned with maximising efficiency. While it might be argued that competitive markets deliver efficient outcomes, attempting to seek to replicate their outcomes in the case of natural monopoly infrastructure has been demonstrated to be problematic, and has accordingly not been included in the guiding principles of the NGO and RPP.

Even if the test to be applied was the replication of a competitive market the MEU's depiction is incorrect and the proposed changes are asymmetric, where in a competitive market they are symmetric. That is, while in a competitive market a business cannot recoup early equipment write offs they can continue to earn returns on assets that have been written down. If the MEU wishes to see the used and useful test applied it would also have to allow the assets to earn a return if they have been written down and still used. If they want the used and useful test to apply to replicate

competitive markets they would have to agree to a regime where returns on fully depreciated assets were available if they continued to be useful.

> The better answer to the issues the MEU has raised is in the incentives for capex. These are all available in the current Rules. These are delivered through service providers having the opportunity to earn regulated revenues including a return on and return approved forecast capex even though they may spend a lower amount of capex than forecast

The appropriate level of this incentive level is constrained by:

- a thorough *ex ante* capex review with the service provider benefitting from capex underspend through receiving the return on and return of capital during the forecast period; and
- the actual capex being rolled into the capital base, subject to proportionate *ex post* capex review.

Moreover, where some portion of the capital base is significantly under utilised it may be removed from the capital base and included in a speculative capital expenditure account for later reinclusion, should the level of utilisation indicate reinstatement.

2. Response to specific aspects of the proposed drafting changes to the NGR

In addition to the key matters of substance above, there are major practical problems with the MEU's proposed amendments:

a. proposed changes to rules 77(1)(iv), 77(2)(f) and 77(3)(d)

APIA notes that the proposed changes really deal with the same change but for different access arrangement processes – that being to add one additional means by which the value of the capital base is to be reduced. However, in each instance, it fails to recognize that the asset bases for many pipelines were not set by reference to a "depreciated actual value" process. This therefore would result in a significant amount of work having to be undertaken by regulators and service providers and has the potential to re-open many of the uncertainties that led to a significant number of appeals of regulatory decisions relating to the setting of the initial capital base for pipelines.

b. proposed changes to Rule 79(2)

The proposed addition of Rule 79(2)(e) seems to run totally contrary to what the MEU is seeking to achieve. It would have the effect of allowing expenditure to be conforming capital expenditure without meeting any of the 3 limbs in Rule 79(2)(a-c**).**

c. changes not identified by MEU

The proposed changes are not workable where the fact that Regulator applies depreciation based on forecast expenditure rather than actual expenditure[4]. So, if the asset were to be re-optimised, the depreciation schedule would be based on the previous RAB asset and there would be a disconnection between the depreciation allowed from Access Arrangement Period to Access Arrangement period and respective capital bases. Moreover there would therefore be no certainty afforded to the service provider that it would have the opportunity of recovering at least the efficient costs it has incurred. Serious questions therefore arise as to whether this would be consistent with the NGO and the RPP.

3. Response to the AEMC Questions

Question 1: What would the impact on investment be with the rule change requests? Would this have a positive or negative impact?

The rule change request to optimise the RAB ate each Access Arrangement is likely to have at least three effects on service providers that would lead to less efficient investment in energy infrastructure.

a. Service providers can be expected to invest in smaller increments of capacity to avoid the potential for reductions in their capital bases at each review. The result will be a substantially greater capex requirement in the long run, thereby increasing the cost of gas transportation. This is demonstrably contrary to the NGO and inconsistent with RPP in particular section 24 (6) & (7)(f) the NGL, which require consideration of the economic costs of over and under investment and over and under utilisation;
b. The uncertainties created by re DORCing of an asset base will increase the perceptions of investment risk by providers of both debt and equity. It is also likely that such a proposal will increase the systematic risk of the businesses thereby increasing the value of Beta used in calculating the cost of equity under the CAPM;
c. It will focus service providers on minimising risk of stranding as a result of re optimising of their capital bases at regulatory reviews rather than on efficient investment and operation

Whilst in the short-term discouraging over-investment might deliver lower costs to energy consumers, in the long-term it cannot. The economies of scale in energy utilities are such that incremental expansions to meet short-term demand are not as economic as large investments.

[4] It should be noted that regulators have moved away from use of actual depreciation and have instead applied forecast depreciation, thereby applying the principle of financial capital maintenance. The unfortunate effect of not using actual depreciation is to reduce the incentive to reduce capital expenditure. In APIA's view the use of depreciation on actual capital expenditure would contribute to addressing the issue capex incentives.

Optimisation of the RAB also increases risks to investors. If anticipated demand fails to materialise, investments that the regulator deemed appropriate in one regulatory determination may be removed from the RAB at a later date.

Question 2: Is it appropriate for the AER to determine and assess the age and condition of a regulated network business's asset?

Yes, but that is effectively what is done at each Access Arrangement review in any event. Profiles of asset age and depreciation are provided as part of Access Arrangement Information and other information provided to the AER. In addition, information supporting *ex ante* and *ex poste* capex includes information about assets that are (i) replacement in nature, (ii) otherwise needed to stay-in-business or (iii) associated with growth in demand either to expand capacity or extend its reach.

Generally, any assessment of age and condition is supported by expert engineering consultants. The tasks that are of real concern are those of optimisation and determination of replacement cost over which there can be considerable debate and uncertainty. This becomes undesirable ground for the AER to have to undertake decisions. It is arguable whether the external consultants that are available will have the requisite expertise and experience to advise the AER properly.

Question 3: Does the increase in administrative burden outweigh the benefits of the proposed rule?

Yes. The benefit of the proposed rule is at best doubtful, particularly given the lack of evidence that the perceived issues actually occur.

The administrative burden, however, of a reDORCing would be considerable. It would be akin to establishing the effort required to establish the initial Capital Base for the first Access Arrangements. However, the focus on how to undertake an accurate optimisation and develop assumptions needed to undertake them would be considerable. On top of this costing methodologies to estimate and the replacement costs for existing asset open to considerable debate. As a result of the very considerable uncertainties around the whole optimisation process and the potential significant impact on regulated revenues the effort required by the service providers and the AER would become as significant as the debates about the cost of capital, with the difference that each businesses assets are different with the only common ground available being the principles used to undertake a DORC process – and even these would suffer from ongoing debate.

The process of establishing initial ICBs and DORCs was difficult enough and neither the AER nor service providers would have any appetite to have a recurring revaluation process.

Question 4: Does rule 85(1) of the NGR (capital redundancy) adequately address the proposed rule's objective to remove the under-utilised assets from the RAB? Should rule 85(1) of the NGR be duplicated in the NER?

Yes, rule 85(1) does adequately address the issue, and as described above it has been used in the past.

It is APIA's view that the mechanisms of in the NGR are adequate to address all the issues raised in the proposal. It appears that the NER, with no mechanism for *ex post* capex review or a similar provision to rule 85(1) of the NGR may require such mechanisms if the issues raised in the proposal are deemed to be material.

Question 8: When should any proposed rule commence?

Ideally, not at all. However, in the remote likelihood that the AEMC were to make a Rule change, any proposed rule should commence in line with any rules arising from the other rule changes currently under AEMC consideration.