

20 January 2012

Mr John Pierce
Chairman
Australian Energy Market Commission
Level 5, 201 Elizabeth Street
Sydney NSW 2000

Via website: www.aemc.gov.au

Dear John

National Electricity Amendment (Optimisation of Regulatory Asset Base and Use of Fully Depreciated Assets) Rule 2011

Grid Australia welcomes the opportunity to provide this submission to the Australian Energy Market Commission (AEMC) in response to the above Rule change proposal submitted by the Major Energy Users Inc (MEU).

Grid Australia's members have a direct and substantial interest in the matters addressed in the proposed Rule changes.

The MEU's proposed Rule change contains two components upon which the AEMC is consulting, which relate to the optimisation of assets, and continued use of depreciated assets and raises the question as to whether TNSPs are being efficient in their investment decisions.

Grid Australia considers that a combination of sustainable commercial incentives and well-focused regulatory obligations is the best mechanism for delivering this outcome.

The effectiveness of the current incentive arrangements and regulatory obligations for capital expenditure is central to the AER's proposed Rule changes¹ and the Transmission Frameworks Review². Given this, Grid Australia urges the AEMC to align its consideration of the MEU proposed changes with its assessment of the AER's proposed rule changes to ensure that a holistic approach to expenditure incentives is undertaken.

Grid Australia notes that the MEU has not proposed a refinement of incentives, but rather that the AER be required to second-guess TNSP's decisions and judge past decisions with the full benefit of hindsight, with the ability to deny the recovery of substantial investments.

¹ *Economic regulation of transmission and distribution network service providers: AER's proposed changes to the National Electricity Rules*, AER, September 2011

² *First Interim Report: Transmission Frameworks Review*, AEMC, 17 November 2011

As such, the proposed Rule change would amount to a substantial change to the allocation of risk in the regulatory regime, and have significant implications for the incentive to invest. The likely outcome is that efficiency would be considerably reduced as TNSPs might be penalised for making investments which are prudent at the time the decision is taken. This would be to the detriment of the National Electricity Objective (NEO) and ultimately consumers of electricity.

The following attachment provides Grid Australia's more detailed response to the MEU proposed Rule changes.

Grid Australia looks forward to continuing to work with the AEMC and stakeholders through the further stages of the Rule change process. If you require any further information, please do not hesitate to contact me on (08) 8404 7983.

Yours sincerely



Rainer Korte
Chairman
Grid Australia Regulatory Managers Group

National Electricity Amendment (Optimisation of Regulatory Asset Base and Use of Fully Depreciated Assets) Rule 2011

Response to AEMC Consultation Paper

20 January 2012

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Executive Summary

Grid Australia welcomes the opportunity to provide a submission to the Australian Energy Market Commission (AEMC) in response to the AEMC's consultation paper¹ on a Rule change proposal made by the Major Energy Users Inc (MEU).²

As the Commission is aware, Grid Australia represents the owners of all major electricity transmission networks in the National Electricity Market (NEM). As a result, its members have a direct and substantial interest in the matters addressed in the proposed Rule change.

The MEU's proposed Rule change contains two components, which relate to the:

- optimisation of assets, and
- continued use of depreciated assets.

The MEU's proposed Rule change raises the question as to whether TNSPs are being efficient in their investment decision making. Grid Australia considers that a combination of sustainable commercial incentives and well-focused regulatory obligations is the best mechanism for delivering this outcome.

The effectiveness of the current incentive arrangements and regulatory obligations for capital expenditure is central to the AER's proposed Rule changes³ and the Transmission Frameworks Review⁴. Given this, Grid Australia urges the AEMC to align its consideration of the MEU proposed changes with its assessment of the AER's proposed rule changes to ensure that a holistic approach to expenditure incentives is undertaken.

Grid Australia notes that the MEU has not proposed a refinement of incentives, but rather that the AER be required to second-guess TNSP's decisions and judge past decisions with the full benefit of hindsight, with the ability to deny the recovery of substantial investments. As such, the proposed Rule change would amount to a substantial change to the allocation of risk in the regulatory regime, and have significant implications for the incentive to invest. The likely outcome is that efficiency would be considerably reduced as TNSPs might be penalised for making investments which are prudent at the time the decision is taken. This would be to the detriment of the National Electricity Objective (NEO) and ultimately consumers of electricity.

¹ *Consultation Paper: National Electricity Amendment (Optimisation of Regulatory Asset Base and Use of Fully Depreciated Assets) Rule 2011; National Gas Amendment (Optimisation of Regulatory Asset Base and Use of Fully Depreciated Assets) Rule 2011*, AEMC, 1 December 2011

² *Rule change proposal: Economic regulation of transmission and distribution network service providers: Proposed changes to the National Electricity Rules and National Gas Rules*, MEU, October 2011

³ *Economic regulation of transmission and distribution network service providers: AER's proposed changes to the National Electricity Rules*, AER, September 2011

⁴ *First Interim Report: Transmission Frameworks Review*, AEMC, 17 November 2011

Optimisation of assets

The MEU has proposed that the AER be required to assess whether the value of the assets used in the regulatory asset base reflects the minimum that is currently required in view of changes to the utilisation of assets since the investment was made. The value of assets that are judged to be surplus would be removed from the RAB.

Grid Australia considers that the ongoing threat of optimisation inherent in the MEU proposal would not improve either the efficiency of investment or the efficiency of asset utilisation. Indeed, the proposal is more likely to discourage efficient investment.

For investment efficiency to be advanced, TNSPs must be able to respond to incentives at the time the decision to invest is made. Once investment has occurred these investment decisions are sunk and there is little that TNSPs can do (other than reduce their prices) to affect the utilisation of the assets as this depends on the decisions of consumers and generators.

The proposal put forward by the MEU would substantially increase the complexity and cost of the regulatory process. More importantly, however, the proposed measure is not the best available for ensuring the efficiency of transmission investment as it would detrimentally influence future investment decisions:

- The threat of optimisation imposes a one-sided liability on investors that must be compensated for any investment to take place. Once appropriate compensation was provided, optimisation would most likely increase customer bills.
- Investment would most likely be discouraged in those assets whose utilisation is most difficult to predict. Notably, those assets justified predominantly on the basis of market benefits, such as new interconnectors, would likely be affected.

In addition, the proposal in practice would have little effect on the efficiency of pricing to individual customers, and hence the efficiency of the utilisation of the network. This is because the locational element of existing transmission prices already provides a signal for the efficient use of the transmission network that is able to account for surplus capacity on the network. Moreover, this locational element would be materially unaffected by whether or not underused assets were 'optimised'. If it is considered that there is an issue with regards to signals for the efficient use of the network, this would be improved by addressing the pricing rules directly, rather than through the costly measure proposed. That said, we note that no evidence has been provided that the current transmission pricing method has resulted in inefficient network utilisation.

As noted above, the more relevant objective is to ensure that TNSPs make efficient investment decisions, taking full account of the information that is available at the time that the decision is made. The question of whether the current transmission regime contains the most appropriate package of incentive arrangements and regulatory measures to deliver this

objective is a key concern of the AER's proposed Rule changes⁵ and the Transmission Frameworks Review.

The MEU's proposal is but one option for improving incentives and should be assessed in conjunction with other options in accordance with the framework proposed by Grid Australia and the Energy Networks Association in response to the AER's proposals on these matters.

Continued use of depreciated assets

The MEU has proposed that the AER must ensure that an asset to be replaced has passed its useful life and cannot be used productively for further service before a TNSP is able to recover the costs of its replacement.

The requirement for the AER to review replacement expenditure is already a key part of its assessment of capital expenditure programs during revenue cap reviews (just as the AER also reviews augmentation expenditure proposals). Grid Australia considers that it would be unwise and impracticable to hardwire a rule requiring replacement expenditure to only to be recovered when an existing asset is not 'used and useful'. Replacement decisions, among other things, require a careful trade-off between:

- capital (replacement) expenditure;
- operating (maintenance) expenditure;
- the risk of asset failure (the consequences of which are borne by customers through loss of supply and TNSPs through their reliability obligations and the service target performance incentive scheme (STPIS)); and
- the need to also augment the relevant assets to increase service capability to match growth in asset utilisation over time.

The decision to replace an asset is not a simple binary decision as assumed by the proposed Rule. The MEU also incorrectly assumes that the regulatory book value of an asset is a determinant in the decision as to whether to replace the asset.

Grid Australia also notes that it is unclear whether the MEU is proposing that the AER undertake an ex-ante or ex post review of whether asset replacement is necessary. However, as the AER has acknowledged, undertaking ex-post assessments of capital expenditure are not straightforward exercises for a regulator. Instead, as noted above, the best mechanism to encourage efficient replacement expenditure is to put in place financial incentives (supported by appropriate regulatory obligations) for TNSPs to make efficient decisions with respect to all expenditure, including replacement capital expenditure.

⁵ *Economic regulation of transmission and distribution network service providers: AER's proposed changes to the National Electricity Rules*, AER, September 2011

1. Introduction

The MEU's proposed Rule change contains two components upon which the AEMC is consulting. The two components of the rule change are:

- *Optimisation of assets* - When assessing the value of the RAB at each revenue cap review, the AER shall ensure that the value of the assets used in the building block approach (the RAB) reflects the minimum value necessary to ensure the provision of the services required. As a consequence, those assets which do not meet this criterion would be deducted from the RAB.
- *Continued use of depreciated assets* - When approving a replacement for an asset that has been fully or partially economically depreciated, the AER must ensure that the asset to be replaced has passed its useful life and cannot be used productively for further service. It is not clear whether the MEU intends that this clause apply only on an ex ante basis, or that it also be applied on an ex-post basis.

The MEU recognises that the AER has recently proposed changes to the Rules that address similar issues.⁶ However, MEU considers that this proposal contains a number of critical gaps which its proposal seeks to remedy. Specifically, the MEU describes the rationale for its proposal as follows:⁷

“It is clearly inefficient for consumers to pay for assets which are significantly underutilised, clearly implying that consumers should not be required to pay for assets that they do not use, or use to significantly less than their capacity. Imposition of this requirement would provide an incentive to service providers not to over invest in the assets. Equally it is accepted that it may be more efficient to build an oversized asset if there is a strong expectation that in the next few years the spare capacity will be utilised. But there should be a test or checks undertaken to ensure that this is so.

It is also inefficient to replace assets which, from a technical viewpoint, do not need to be replaced as they are still used and useful. The concern that consumers have is that there is an incentive for a service provider to replace assets which are economically depreciated, because under the building block approach, such assets do not provide any profit to the service provider, whereas replacements assets will provide a profit.”

Grid Australia notes that the MEU has asserted that efficiency would be improved under its proposal but has not explained the mechanics of how in fact efficiency would be advanced. Grid Australia notes further that the MEU's proposal is but one option for improving incentives and should be assessed in conjunction with other options in

⁶ *Economic regulation of transmission and distribution network service providers AER's proposed changes to the National Electricity Rules*, AER, September 2011

⁷ *Rule change proposal: Economic regulation of transmission and distribution network service providers: Proposed changes to the National Electricity Rules and National Gas Rules*, p.14, MEU, October 2011

accordance with the framework already proposed by Grid Australia and the Energy Networks Association in response to the AER's proposals on these matters.

1.1 AEMC assessment framework

The AEMC has stated that it will assess the MEU's rule change proposals by asking four questions, namely whether the proposals will:

- permit the TNSPs to recover efficient cost in delivering secure and reliable supplies to customers
- promote the efficient utilisation of assets
- affect the incentives acting upon the TNSPs to make efficient investments to the benefit of customers, and
- create complexity or uncertainty in the regulatory process.

Grid Australia notes that the first and third of these questions are closely related and it could assist for these to be considered together. This is because a critical prerequisite to invest is for TNSPs to have a reasonable opportunity to recovery efficient cost.

This submission addresses the specific proposals put forward by the MEU having regard to the issues identified by the AEMC in its consultation paper.

Grid Australia also considers that a number of the questions raised by the AEMC in relation to the AER's proposed Rule changes are equally applicable in the context of this MEU Rule change proposal, namely whether:

- *A problem has in fact been identified and properly described* – Grid Australia considers that the MEU has not correctly specified the objective that the regime should target. The important question for investment in network infrastructure is whether efficient investment is encouraged at the time of the decision to invest.
- *The AER can already address the problem* – with respect to replacement expenditure, the AER already has a role in assessing the efficiency of all proposed expenditure on an ex-ante basis. In addition, a combination of incentives and regulatory obligations already seek to encourage TNSPs to only undertake network investment when it is efficient to do so, although some refinement to the incentives may be desirable.
- *A better solution to the problem exists* – to the extent that the MEU has identified a problem, it is with respect to the incentives for capital expenditure, as articulated in Grid Australia's submission to the AER's proposed Rule change. This is, therefore, a matter that can be addressed as part of the AER Rule change process.

2. Context for the AEMC's assessment

Before directly addressing the specific proposals put forward by MEU, Grid Australia considers that it is important to provide some relevant contextual background to the issues surrounding the Rule change proposal. To this end, this section discusses:

- Concepts of ex-post regulation which are incorporated in the MEU Rule change proposal
- The ex-ante framework of the current regulatory regime, and
- The benefits of the existing framework.

2.1 Overview of Grid Australia position

- The current regulatory regime:
 - Ensures TNSPs only take on risks they are best placed, and able, to manage
 - Provides incentives to encourage productive, allocative and dynamic efficiency, although some scope for improvement to incentives may be desirable
 - Encourages prices to be set so they provide a cost based signal while recovering residual costs in the least distorting manner, and
 - Seeks to minimise the costs of regulation and regulatory error.
- If a regime of ex-post optimisation or prudence was introduced TNSPs would be required to take on considerable risks that would be difficult or impossible to manage.
- The risk that costs could not be recovered under an ex-post framework would create a disincentive to undertake otherwise efficient investment and potentially increased prices to customers in order to compensate for the additional risks incurred.

2.2 Concepts of ex-post regulation

Grid Australia considers that it is first important to be clear about the various concepts and principles incorporated in the MEU Rule change proposal.

The MEU proposes a form of ex-post assessment of investment. There are two distinct types of ex-post regulation that can be applied:

- *Ex-post prudence test* – under this form of ex-post assessment the regulator assesses whether the value of investments made in the preceding regulatory period should be included in the RAB going forward. The proper application of this form of ex-post assessment requires the regulator to base its assessment on whether the investment was efficient given the information available to the investor at the time the investment was undertaken. If the regulator determines that the investment was inefficient, then the inefficient portion of the relevant investment is not included in the RAB.
- *Optimisation of assets (also referred to as “regulatory stranding”)* – this form of ex-post assessment assesses whether any investment (in full or in part) continues to be required, given the full advantage of hindsight. Unlike an ex-post prudence test, an optimisation assessment applies to all assets in the RAB, not only new investments undertaken in the preceding regulatory period.⁸

Both of these measures are one-sided, meaning that such a measure could only impose a negative outcome on the regulated entity. Accordingly, if either of these measures were put in place, then compensation for this asymmetric downside risk is required to ensure that the regulated entity has a reasonable opportunity to recover efficient cost and thus not dissuade investment.

However, the two measures differ materially in relation to the potential size of compensation that is required. As the prudence test requires the regulator to place itself in the same position as the investor, the value of the downside asymmetric risk may not be substantial (at least if the test is undertaken correctly). However, the asset optimisation would involve reassessing the need for past investments taking account of the full benefit of hindsight. Even the most efficient TNSP could never put in place measures to provide a reasonable assurance that this test will be passed, and so the value of the downside asymmetric risk – and hence the compensation required – has the potential to be highly material.

It is notable that the MEU’s proposal is to introduce a general optimisation test for all assets.

An ex-post framework contrasts with an ex-ante framework for regulation. Under an ex-ante framework the regulator assesses a revenue requirement up-front and

⁸ The ‘optimisation’ test that the MEU has proposed is a one-sided version of the asset valuation method that existed originally under the National Electricity Code, whereby the value of the TNSP’s RAB was reset at a new estimate of the depreciated optimised replacement cost (DORC) at periodic intervals. Under this asset valuation method, the RAB could move in either direction, depending on the movement of construction costs. Indeed, Grid Australia understands that in New Zealand where there had been a history of revaluing assets at DORC (or, more accurately, the optimised deprival value, which reduced to DORC in almost all cases) and over the last decade the estimated DORC values for the electricity networks increased substantially as construction costs increased at a much higher rate than the consumer price index.

incentives and obligations are relied upon to encourage efficient investment during the regulatory period.

2.3 Current regulatory regime

The current regulatory regime incorporates an ex-ante framework to encourage efficient network investment and pricing rules that seek to encourage efficient network use.

The ex-ante framework includes the following elements to encourage efficient capital expenditure:

- A requirement for the AER to assess a TNSP's revenue proposal for forecast expenditure and to determine whether the forecasts reasonably reflect the expenditure criteria in the Rules having regard to various objectives, criteria and factors. This assessment applies to expenditure on new assets as well as the replacement of existing assets.
- During the regulatory period, TNSPs have an incentive to undertake efficient investment as they are able to retain the benefit of any underspend and incur the cost of any overspend relative to forecast amounts. The power of this incentive is strengthened by the application of actual depreciation to the roll-forward of capital expenditure.⁹
- Certainty for efficient cost recovery is provided to the TNSPs by actual capital expenditure incurred during a regulatory control period being added to the regulatory asset base, regardless of whether the expenditure is above or below forecast amounts¹⁰. This recognises that the efficient level of expenditure can turn out to be different to what was forecast some years previously during a probabilistic assessment of expenditure requirements at a revenue cap review.

In addition, it is relevant to note that the Rules already contain a provision that permits the AER in certain specific circumstances to write-down the value of a TNSP's assets that become underutilised. Importantly, however, this optimisation is limited to a narrow range of assets (those that serve a small number of large users) and the optimisation is only permitted where the TNSPs did not take reasonable measures to prevent the loss of revenue or load, namely requiring a long term contract with the

⁹ However, as identified in Grid Australia's submission to the AER's proposed Rule changes, there are number of incentive issues related to the use of actual depreciation which mean it may not be a first best solution to providing capital expenditure incentives to TNSPs.

¹⁰ It should also be noted that the TNSPs' RABs, upon which actual capital expenditure is added, were subject to a detailed assessment to determine their fair and reasonable values when independent regulation was introduced.

customer(s) as prior to making the investment, or discounting the transmission charges to attempt to retain the customer(s).¹¹

Grid Australia has recognised in its previous submissions, however, that there are shortcomings in the existing framework with respect to the clarity and comprehensiveness of the incentives for efficiency, and has welcomed consideration of refinements to the regime. As noted in Grid Australia's submission to the AER Rule change proposal, there are likely to be opportunities to improve the incentives to minimise capital expenditure.¹²

In addition, as noted in the context of the Transmission Frameworks Review (TFR), options also exist to improve the comprehensiveness of incentives for service performance with respect to the proposed network access models. Grid Australia considers that the AER Rule change and the TFR are the appropriate forums to address these issues given the need for a holistic perspective on the application of incentives.

Whether or not the network is utilised is a function of the efficiency of the prices that are set for transmission services. The Rules seek to ensure that prices provide customers with incentives for the efficient use of network services. This includes a requirement for the locational component of prices to be based on demand at times of greatest utilisation of the network and for which network investment is most likely to be contemplated.

2.4 Benefits of the existing framework

Grid Australia considers that the existing framework delivers a number of benefits with respect to encouraging efficient investment and use of the network.

- It ensures TNSPs only take on risks they are best placed, and able, to manage
- It provides incentives to encourage productive and dynamic efficiency
- It encourages prices to be set so they provide a cost based signal while recovering fixed costs in the least distorting manner, promoting allocative efficiency, and
- By harnessing the power of incentives, the AER's task of ensuring that customers pay only for efficient investment is made more practicable.

¹¹ It is relevant to note that even though the optimisation provision only requires TNSPs to undertake measures to attempt to avoid or reduce the effect of the loss of the customer(s), clause S6A.2.3(b) of the Rules nonetheless recognises that this may impose risk and allows for additional compensation to be provided to reflect any additional risk.

¹² *Consolidated Rule Request – National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2011: Response to AEMC Consultation Paper*, Grid Australia, December 2011

2.4.1 Risk management and compensation – providing TNSPs with ‘a reasonable opportunity to recover efficient costs’

Electricity transmission investment involves investment in assets that tend to have physical and economic lives that are upward of 40 years. The costs for network assets are typically recovered over a similarly long timeframe. Once an investment decision is made it is largely irreversible. This is because the assets required to provide transmission services have limited, or no, viable alternative uses. The nature of a transmission business means that factors that influence the capacity for a TNSP to recover costs can have a significant influence over risks incurred and the incentives for investment.

Furthermore, electricity transmission investments are capital intensive. The capacity of the NSPs to access funds requires maintenance of strong credit ratings, which in turn is advanced by limiting the risk associated with transmission investments to a tolerable level.

A key feature of the ex-ante framework is that it provides certainty regarding the recovery of capital costs once they have been incurred, thus limiting the risk associated with long-lived transmission investments to a reasonable level. Rather, the ex-ante framework focuses on ensuring that the financial incentives and regulatory obligations encourage investment decisions to be efficient in the first place. Providing certainty of recovery gives recognition to the fact that most transmission investments, once incurred, cannot be reversed, and that even the most efficient of TNSPs could not be expected to make investments that remain used as envisaged with the benefit of perfect hindsight over the lifetime of the assets. It also recognises that there is limited capacity for TNSPs to influence the utilisation of assets and hence manage the risk of their assets becoming stranded.

The benefits of an ex-ante approach to regulation have been well recognised by regulators and policy makers in Australia. The general consensus in Australia has been that using incentive regulation to encourage efficient investment – which is a key feature of an ex-ante framework – will both provide a better environment for transmission investment while also delivering better outcomes than under an ex-post regime. The main benefit of an ex-ante regime stems from the fact that using financial incentives to encourage efficient outcomes harnesses the expertise of the TNSPs and is a more practicable regime for a regulator to administer, which is discussed further in section 2.4.4. In addition, the general consensus in Australia has been that ex-post regulation, and optimisation in particular, is likely either to provide a disincentive for efficient investment or to require prices to rise compared to the counterfactual.

The ACCC, when finalising its Statement of Regulatory Principles (SRP) ruled out the use of an ex-post prudence test. It considered the main advantage of the ex-ante framework is the ability to provide certainty to TNSPs, and therefore, improved incentives:

“To date [2004] the ACCC has retrospectively assessed the efficiency of a TNSP’s investment program. This not only requires an assessment of investment decisions after they have been made, but also requires an assessment of the efficiency with which assets were developed. This is highly intrusive and creates uncertainty...In designing the revised incentive, the ACCC has sought to promote certainty and create incentives for efficiency.”¹³

“ex post assessment... creates uncertainty for investors that, after having invested, the ACCC could decide that the investment was not prudent and hence disallow recovery of the investment cost in regulated charges.”¹⁴

This view was supported by the AEMC in developing the current chapter 6A Rules when it recognised the impact that an ex-post review may have on the incentives for efficient investment.

“Taking into account the need to ensure the regime provides appropriate incentives for TNSPs to invest in sufficient capacity to maintain service levels amid dynamic demand conditions, the Commission maintains the view that it is not appropriate for an overspend of capital to be subject to a prudency review. If the AER was given the scope to exclude capital overspend from the RAB the power of the incentive to efficiently incur capital expenditure costs that were not foreseen at the time of the applicable regulatory determination would be reduced.”¹⁵

It is relevant to note that more recently the AER has indicated that it considered and rejected the use of an ex-post prudency test as a means of improving efficiency. The AER rejected this approach on the basis that it would increase regulatory risk and be impracticable to administer, stemming from the high evidentiary burden the regulator would need to satisfy.

However, the AER is concerned that by requiring an assessment of the efficiency of investment decisions after they have been made, ex post reviews may add to regulatory risk by creating potential for investment write downs. In addition, the evidentiary burden that the regulator must satisfy before it could disallow an investment is so high that ex post reviews may offer limited protection against inefficient expenditure.”¹⁶

Further, Grid Australia agrees with previous regulatory decisions that have identified that in order to encourage efficient investment under an ex-post framework, additional compensation is needed for investors to take on the additional risks imposed. Indeed, such compensation may increase customer bills by more than any reduction in the RAB that would result from an ex-post review. For example, when the Essential

¹³ *Statement of principles for the regulation of electricity transmission revenues – background paper*, p.viii, ACCC, 8 December 2004.

¹⁴ *Decision, Statement of principles for the regulation of electricity transmission revenues – background paper*, p.44, ACCC, 8 December 2004.

¹⁵ *Rule Determination: National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006 No. 18*, p.99, AEMC, 2006

¹⁶ *Rule Change Proposal, Economic Regulation of Transmission and Distribution Network Service Providers*, pp.43-44, AER, September 2011,

Services Commission of Victoria (ESCV) was explaining why it proposed not to retain the power to optimise assets in the future, it noted as follows:

“... the Commission noted that under a contrasting policy whereby distributors bear the consequences of asset stranding, the regulator would be obliged to provide distributors with compensation for the expected cost of accepting this liability. If the expected loss is quantified precisely, then prices will be expected to be unchanged on average compared to the Commission’s proposed approach. However, if the compensation erred towards the upper end of the range of estimates, customers would be on average worse off compared to the Commission’s proposed approach.

... the incentive arrangements described in section 3.8 of this Final Decision – whereby distributors effectively bear the cost of their expenditure decisions for between five and six years – is a far more targeted, and hence appropriate, incentive mechanism. In particular, the Commission noted that many of the events that may result in a gas distributor’s assets becoming unused at some future time are outside of the distributors’ control, and therefore not events that could be planned against.”¹⁷

Grid Australia notes that while compensation can be provided to account for the additional risks associated with an ex-post regime, this is still a second-best solution compared to an ex-ante regime. This is particularly the case for transmission given its interaction with the wholesale market arrangements. That is, even with compensation, there may still be an incentive for TNSPs to avoid discretionary investments, such as interconnectors, due to the uncertainty as to the future utilisation of these assets. This incentive would arise regardless of the efficiency of the investment at the time the decision to invest is made. As a result of not making efficient investment in these market benefit projects prices to end-use customers may rise even further.

Grid Australia also notes that the AEMC’s Consultation paper refers to a provision in the National Gas Rules that allows for an access arrangement to include a mechanism to remove redundant assets from the capital base. Importantly, the regulator is not simply empowered to remove redundant assets at a price review – rather, for such a power to exist, the regulator must have announced the intention to exercise the power at an earlier review, and to provide the necessary compensation (or allow the acceleration of depreciation) at that earlier review. Grid Australia understands, however, that given concerns similar to those articulated above that this provision has not been implemented in gas access arrangements to date. Therefore, introducing an equivalent a provision in the electricity framework (that is, one that is optional for the AER) would reduce regulatory certainty and predictability and most likely be redundant given the reluctance of regulators to use such a provision.

2.4.2 Incentives work to encourage productive and dynamic efficiency

As identified in previous submissions to the AEMC, Grid Australia considers that a combination of sustainable commercial incentives and well-focused regulatory obligations are the best means of promoting outcomes that are consistent with the

¹⁷ Review of Gas Access Arrangements: Final Decision, p.152, ESC, October 2002

NEO. The incentives and obligations in the existing framework seek to encourage efficient levels of capital expenditure in the following ways:

- Firstly, the AER undertakes a prudence test of the forecast capital expenditure and TNSPs retain the benefit of any underspend, or incur the cost of any overspend, compared to the approved forecast *for the remainder of the relevant five year regulatory control period*.¹⁸ In this way, TNSPs are provided with an incentive to minimise capital expenditure, all else being equal.
- Secondly, the incentive to inefficiently overspend would only exist if regulated businesses expected the regulated cost of capital to exceed the “actual” cost of capital required by the investors over the life of the asset in question. It is unlikely that businesses would make investments on the expectation that any transient “wedge” between the regulated and actual cost of capital would persist into the long term. In addition, Grid Australia rejects the proposition that the current regulatory allowance exceeds the true cost of capital. Indeed, the potential exists for the cost of equity to be materially understated if the current extremely low risk free rate is employed mechanically in the capital asset pricing model (CAPM).
- Thirdly, significant investments are subjected to public consultation on their costs and benefits through the Regulatory Invest Test for Transmission (RIT-T). The Rules allow interested stakeholders to challenge the need and efficiency of a particular project at this time. In addition, under the revised planning arrangements for the NEM, AEMO has an increased function with respect to investment planning and its input into RIT-T assessments. This involvement by a well-resourced third party, as well as the AER’s recent practice of undertaking compliance reviews of TNSP’s application of the RIT-T, places a further discipline on the efficiency of transmission investments.
- Fourthly, internal cashflow constraints arising from the need to maintain credit ratings and debt covenants limit the capacity for a TNSP to invest, further limiting the scope for over-investment.

As noted above, and in its submissions to the AER Rule change proposal and TFR, Grid Australia acknowledges that there is scope for improvements to be made to the incentives framework that applies to transmission networks.

However, Grid Australia’s firm view is that the adjustment of ex-ante incentives is a preferred solution to encouraging efficient investment rather than unnecessarily increasing the risks of investment on TNSPs and potentially deterring otherwise efficient investment to the potential detriment of service performance for customers.

¹⁸ *Rule Determination: National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006 No. 18*, p. 98, AEMC

2.4.3 Prices to encourage efficient network use

The current approach to transmission pricing provides signals for the efficient use of the network. In particular, the locational component is determined using the cost reflective network pricing approach (CRNP) specified in the Rules. In addition, where applied, the modified CRNP approach adjusts prices based on the utilisation of each asset.

Under existing practice, regulatory book values have little influence on the locational component prices. This is because, under the CRNP approach, locational prices are derived by allocating a fixed proportion (50 per cent) of total revenue to different connection points, where the optimised replacement costs of the various assets are used to perform this allocation. Given this approach to transmission pricing, ex-post optimisation of assets would have no material effect on efficient, usage-based price signals for customers. Instead it will only serve to reduce the overall revenue requirement for a TNSP.

2.4.4 Reduced regulatory complexity

The current ex-ante incentive framework provides TNSPs with a profit motive to make efficient investment decisions. By providing such a profit incentive, the regime is able to harness the superior knowledge of the TNSPs with respect to operational and investment decisions in relation to their assets, including the experience of their personnel with respect to the actual condition of the assets.

Harnessing this information would result in superior outcomes that would occur if the AER was required to second-guess the efficiency of TNSPs decisions. Moreover, by providing the TNSPs with incentives to be efficient, there is no need for the AER to undertake detailed reviews of the efficiency of the TNSP's decisions, thus reducing the regulatory burden while also ensuring that the regulatory is required to undertake tasks that are within its area of expertise (that is, design incentives) and is not required to undertake tasks for which it is not well placed (that is, undertaking detailed reviews of the TNSPs' operational and investment decisions).

Conversely, an ex-post optimisation of assets would appear to envisage a detailed review and assessment of the entire RAB to determine whether the assets in place are still required today to meet service needs. To undertake an optimisation of assets the AER might be required to:

- define asset utilisation and how it is measured
- assess the utilisation of each asset, and
- estimate the optimal required assets and value them at the depreciated replacement cost for the forthcoming regulatory price cap period.

Each of these steps is difficult, material in its outcome to customers and the TNSPs, and open to interpretation and debate. The result of this is likely to be a material increase in the costs of regulation and the risks borne by either customers, TNSPs or both.

In addition, implementing such an optimisation regime would also require substantially more effort on other aspects of the regulatory regime. In particular, the MEU proposal could potentially require the establishment of regulatory book values, asset lives and depreciation methods for each individual asset, which would require substantially more granularity in information keeping than is currently required or is necessary under the existing regulatory framework.

In addition, the MEU proposal would also provide the TNSPs with a strong incentive to argue for faster rates of depreciation (which, given the threat of optimisation, is justified). Grid Australia does not consider that such requirements would be proportionate to the perceived issue at hand.

3. Assessment of the MEU's proposed Rule change

This section assesses the MEU's proposed Rule change with regards to the AEMC's assessment criteria. Grid Australia also considers whether a better solution exists.

3.1 Optimisation of assets

3.1.1 Overview of Grid Australia position

- Grid Australia does not consider that the proposed solution to introduce an assessment to optimise assets will promote the efficient investment in, and efficient operation and use of, the electricity transmission network.
- The proposal to optimise assets will:
 - Discourage efficient investment by providing downside risk to investors that such an investment may be removed from the RAB (even if it was efficient at the time of making the investment decision), particularly for interconnection and like projects.
 - Have no discernible impact on the efficiency of pricing and hence the efficient utilisation of assets
 - Potentially increase prices to customers in order to compensate for the additional risks incurred, and
 - Add complexity and cost to the regulatory process
- Grid Australia considers that to the extent there are concerns about the efficiency of transmission investment this should be addressed through improvements to the incentives within the ex ante regulatory framework, which is a key issue to be considered in relation to the TFR and AER Rule change proposal.

3.1.2 Does the proposed solution promote efficient investment?

The pertinent question for investment in network infrastructure is whether efficient investment is undertaken on the basis of the information that is available at the time the decision is taken. The possibility that assets may become underutilised will always exist given this is influenced by the decisions of network users (consumers and generators) and the long-lived nature of network assets.

Grid Australia considers that the proposed solution is likely to discourage otherwise efficient investment. Optimisation will:

- Discourage investment which is efficient at the time at which the decision to invest is made by providing downside risk to investors that such an investment may be removed from the RAB by failing to meet optimisation test which has the benefit of hindsight.
- Especially discourage investment in assets whose future utilisation is particularly uncertain, regardless of the prudence of the decision to invest at the time the decision to invest is made. Market benefit projects are likely to be most severely discouraged.
- Result in a likely increase in customer bills if investors are compensated for the increase in risk. The increase in risk is the result of the removal of assets from the RAB due to changes in circumstances beyond the control of investors.

3.1.3 Does the proposed solution promote the efficient utilisation of assets?

The MEU proposal will have no discernible impact on the efficiency of pricing and therefore the efficient utilisation of assets. The existing approach to pricing already provides signals for the efficient use of the network and the modified CRNP approach, where applied, addresses issues that arise with the calculation of prices in relation to underutilised assets. Therefore, the MEU proposal would serve only to affect revenue allowances and not the efficiency of usage based prices and asset utilisation. In fact, the need to compensate for the additional risks incurred has the potential to increase prices more than any offsetting price reduction from optimisation.

3.1.4 Will the proposal add complexity to the regulatory process?

As discussed in section 2.4.4 above, the proposed solution increases the complexity of the regulatory process. The MEU's Rule change would require the AER to undertake a number of additional tasks that are difficult, material and subject to interpretation and debate. The result of this will be a material increase in the overall cost of regulation.

3.1.5 Does a better solution exist?

As noted above, the aim of the regulatory framework should be to ensure that prudent and efficient decisions are made at the time of the investment. As a consequence, Grid Australia considers that the focus should be on ensuring that ex-ante incentives in relation to capital expenditure are effective and appropriate. To that end, Grid Australia considers that this is a matter to be considered within the context of the AER's proposed Rule changes and the TFR.

3.2 Assessment of replacement assets

3.2.1 Overview of Grid Australia position

- Grid Australia notes that there is some uncertainty as to whether the MEU is proposing an ex-ante or ex-post assessment of replacement assets. If the MEU's concern is with ex-ante forecasts, then the Rule change proposal is unnecessary as the AER already considers the need for replacement as part of its assessment of revenue proposals.
- Grid Australia notes that there are a number of complex factors that need to be weighed up when considering whether to replace an asset. Hardwiring a requirement that replacement expenditure only be recovered when an existing asset is not 'used and useful' is overly simplistic and has the potential to impose considerable risks.
- If the MEU is proposing an ex-post prudency test for replacement expenditure, regulatory costs will increase and efficient investment may be dissuaded depending on how the test is applied and the level of certainty therein.

3.2.2 Does the proposed solution promote efficient investment?

Grid Australia notes that there is some uncertainty about the nature of the MEU's proposed solution on this matter. The proposed change could be read to either require an ex-ante assessment by the AER or an ex-post prudency test of replacement assets.

Under either approach, hardwiring a requirement that replacement expenditure only be undertaken when an existing asset is not used and useful involves considerable risks.

The MEU assumes that the regulatory book value of an asset is the primary determinant in deciding whether the asset is replaced. However, in practice the replacement of an asset requires a TNSP to consider a number of complex trade-offs. For example, before replacing an asset a TNSP will consider, amongst other things:

- the need for the asset;
- the risk of the existing asset failing and impacting on customer service performance;
- consequent impacts on service incentive arrangements;
- the costs of maintaining the asset;

- the cost of replacing the asset; and
- the ability to align the timing of replacement works with other works.

The need to make complex trade-offs when considering the need for replacement expenditure means that it is impracticable for a binary test to be applied regarding whether assets are ‘used and useful’. Indeed, good asset management avoids assets being run to failure given this could lead to a loss of supply for customers. Requiring the AER to preclude a TNSP from recovering the costs of replacement investment, if the ambiguous criterion ‘used and useful’ is not met, would therefore introduce service performance risk for network users and financial risk for TNSPs.

Grid Australia notes, however, that if the MEU is proposing an ex-ante prudence test of replacement expenditure then the Rules already permit such an assessment. In particular, one of the key issues that the AER will consider when assessing a TNSP’s proposed capital expenditure during a revenue cap review is whether those proposed replacements are prudent and efficient. Moreover, the relevant provisions (clause 6A.6.7) require the AER to undertake a holistic assessment of the trade-offs associated with replacement expenditure requirements, which is superior to the binary ‘used or useful’ test proposed by the MEU.

Lastly, if the MEU is proposing that its test be applied as an ex-post test of the prudence of replacement expenditure, then efficient investment may be dissuaded (depending on how the test is applied and the level of certainty therein). This is due to the risk to investors that the regulator may decide that efficient investments were inefficient and preclude the recovery of costs. The presence of this risk may deter otherwise efficient replacement expenditure by TNSPs.

3.2.3 Does the proposed solution promote the efficient utilisation of assets?

Again, the MEU proposal would not have a material impact on the locational component of transmission prices and therefore will have no discernible impact on the efficiency of the utilisation of assets.

3.2.4 Will the proposal add complexity to the regulatory process?

The MEU proposal would introduce considerable complexity in the regulatory process given it would require the AER to apply an impracticable criterion.

3.2.5 Does a better solution exist?

Grid Australia considers that the heart of the MEU’s concern is whether TNSPs have an incentive to optimise capital expenditure generally. Grid Australia considers that this is a matter best considered by the AEMC as part of the AER Rule change proposal¹⁹ and the TFR.

¹⁹ Consolidated Rule Request – National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2011: Response to AEMC Consultation Paper, Grid Australia, December 2011