Australian Energy Market Commission

RULE CHANGE

RULE DETERMINATION

National Electricity Amendment (Optimisation of Regulatory Asset Base and the Continued Use of Fully Depreciated Assets) Rule 2012

National Gas Amendment (Optimisation of Regulatory Asset Base and the Continued Use of Fully Depreciated Assets) Rule 2012

Rule Proponent(s)
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13 September 2012

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AEMC 2012, Optimisation of Regulatory Asset Base and the Continued Use of Fully Depreciated Assets, Rule Determination, 13 September 2012, Sydney

About the AEMC

The Council of Australian Governments (COAG), through its then Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005. In June 2011, COAG established the Standing Council on Energy and Resources (SCER) to replace the MCE. The AEMC has two principal functions. We make and amend the national electricity, gas and energy retail rules, and we conduct independent reviews of the energy markets for the SCER.

Summary

In November 2011, the Major Energy Users Inc. (proponent or MEU) submitted rule change requests to the Australian Energy Market Commission (AEMC or Commission) in relation to the optimisation of the asset base and continued utilisation of used and useful assets. The requests are in respect of both electricity and gas. The Commission has determined not to make the rules proposed by the MEU.

Summary of the rule change proposal

The MEU claims that National Electricity Rules (NER) and National Gas Rules (NGR) allow actual capital expenditure into the asset base with little or no review. Consumers need to pay for assets that are too large, and for the replacement of the assets that are used but useful.

The MEU proposes that the Commission resolve these problems by making rules that:

- require the regulator to periodically review the existing asset base to ensure that the assets are only included in the asset base to the extent they are utilised; and
- oblige the regulator to reject the allowance for the replacement of an asset that can be used productively for further service, even if it is at the end of its economic life.

Context and other developments

The Commission acknowledges that energy prices, particularly electricity prices, have risen significantly in recent years and that this has had an impact on consumers, both large and small. Against this background, it is understandable that consumers are seeking ways to address rising prices, such as by seeking to ensure that the economic regulation of network services is undertaken as effectively as possible. In the present case the MEU is requesting an adjustment to the rules regarding the asset base.

In the case of electricity, the MEU's concerns can be viewed as part of a broader set of capital expenditure incentive issues relating to concerns about over-investment in networks being considered as part of the network regulation rule change request submitted by the Australian Energy Regulator. The draft rule determination for that rule change request provides for a range of solutions that, if made into final rules and applied, would substantially address the issues raised by the MEU's rule change proposal.[1] In particular, the AER would be given the power to preclude expenditure above the ex ante allowance from being rolled into the Regulatory Asset Base (RAB) where it is not efficient. Another element would require the AER to review and comment on the efficiency of all capital expenditure being rolled into the RAB. In addition, there would be an enhanced ability for the AER to develop capital expenditure sharing schemes, which could have the effect of equalising the power of the incentive within a regulatory period.

The Commission has also proposed changes that would enhance the ability of the AER to set an ex ante capital expenditure allowance which is as efficient as possible and,

1 AEMC 2012, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Draft Rule Determinations, 23 August 2012, Sydney.

thereby, reduce the potential for over-investment. This includes the ability to undertake benchmarking.

The overall effect of these changes, if made, would be that it is less likely NSPs would undertake capital expenditure which is inefficient.

In considering capital expenditure incentives it is also important to note that regulated businesses do not have the same choices and options as competitive businesses. In particular, regulated businesses have an obligation to provide a service to defined standards, including reliability standards, and must invest to do so. Further they may be obliged to invest to meet expected demand growth against the risk that demand growth may not eventuate.

Commission's final rule determination

Addressing the MEU's rule change requests on their own merits, the Commission maintains its position from the draft rule determination that the MEU has not adequately established that the specific problems raised or that these problems warrant the solutions it has proposed.

There are potential benefits associated with the rule change requests. In respect of optimisation, the proposed rules may result in a greater level of utilisation of networks and pipelines. In respect of continued utilisation of fully depreciated assets, they may result in service providers retaining older assets in service for longer.

However, the Commission is not satisfied that the proposed rules will, or are likely to, contribute to the achievement of the National Electricity Objective (NEO) and the National Gas Objective (NGO). The potential benefits of the proposed rules are outweighed by the following considerations:

- they could increase risk to service providers and thus provide disincentives for future efficient investment;
- they would likely increase the complexity, costs and resourcing of the regulatory process, reducing its efficiency; and
- they would require the regulator to take a too detailed role in approving a service provider's projects and plans.

In respect of gas, there are already mechanisms that exist under the NGR which could be used by the regulator to address the specific concerns of the MEU.

The final rule determination details the Commission's reasoning on the points.

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1 Major Energy Users Inc.'s rule change requests

1.1 The rule change requests

In November 2011, the Major Energy Users Inc. (MEU) made requests to the Australian Energy Market Commission (AEMC or Commission) to make rules regarding the optimisation of the asset base[2] and retaining useful assets past their economic life (rule change requests).

The MEU has submitted two requests, one in respect of electricity and one in respect of gas. These requests seek almost identical changes, and are based on the same rationale. As a result, most of this rule determination considers these requests together. References to "rules" refer to both the National Electricity Rules (NER) and the National Gas Rules (NGR) unless otherwise stated.

1.2 Rationale for the rule change requests

This section sets out the problems which the MEU believes exist and its rule change requests are designed to address.

1.2.1 Optimisation of asset base

The MEU claims that rules allow actual capital expenditure (capex) into the asset base with little or no review. The MEU states that there is an implicit incentive on a service provider to maximize its asset base, and therefore profit by building assets which are too large. The proposed rules aim to address this by introducing optimisation for these assets.

In its rule change requests, the MEU has drawn a distinction between competitive and regulated businesses. The MEU states that in a competitive environment a firm would not be able to recover the whole cost of the assets that are under-utilised, as consumers would not be willing to pay for this over-investment and would move to competitors. In contrast, under the current rules, the MEU is concerned that actual capex is allowed to be included in the asset base with little or no review, and there is no requirement in the rules to assess whether the assets provided are appropriately sized for the service being provided.[3] This is likely to be increasingly significant as a result of policies such as those relating to climate change which may mean assets will become under-utilised and possibly redundant. Consumers would be required to pay a rate of return to service providers for assets that are under-utilised or not utilised. In the MEU's view this is not intended by the National Electricity Objective (NEO) or the National Gas Objective (NGO).[4]

The MEU considers it is inefficient for consumers to pay for assets which are not used or significantly under-utilised. Therefore, there should be an incentive on service

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2 The term "asset base" is used in this document to refer to both the regulatory asset base under the NER and the capital base under the NGR.

3 MEU, Optimisation of Asset Base and Use of Fully Depreciated Assets rule change request, October 2011, pp. 9, 10.

4 Id, p. 7.

providers[5] not to over invest in assets. However, it is accepted that it may be more efficient to build an under-utilised asset if there is a strong expectation that in the next few years the spare capacity will be utilised, subject to justification through a test or checks.[6]

1.2.2 Continued use of fully depreciated assets

The MEU also states that in a competitive market, service providers would not replace assets which are still useful. The MEU considers that an asset should be retained by the service provider if it is still useful, even if it is fully depreciated. That is, fully depreciated assets should not automatically be replaced by new assets if they are still useful. However, the MEU is concerned that the automatic replacement of fully depreciated assets is incentivised under the current rules because there are no regulated returns derived from a fully depreciated asset.[7]

Under the current rules, regulated revenues are set ex ante by the regulator for a regulatory period.[8] Depreciation and return on capital are calculated based on the asset base. If an asset is at the end of its financial life, any use beyond this time will not derive any regulated revenues for the business. That is, this asset is excluded from the asset base.[9]

1.3 Solution proposed in the rule change requests

The rule proponent proposes that the Commission resolve the problems discussed above by making rules that:

- require the regulator to review the valuation of all assets when assessing the asset base as part of a regulatory determination[10] to ensure that the value of the assets used reflects the minimum value necessary. This would provide a limitation to ensure that only necessary assets, appropriately sized for the service, are included in the asset base. The asset base would only allow a return on assets to the extent they are used; and
- require the regulator to take steps to assess the requirement for replacement of an asset and not approve the replacement of the assets that are still functional. This would limit the replacement of assets which are still useful, thereby avoiding over-investment.

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5 In this rule determination, the term "service providers" is used to refer to electricity network service providers and gas service providers.

6 Id, p. 14.

7 Id, p. 10. The AEMC notes that recovery of operating expenditure would still be possible.

8 The term "regulatory period" is used in this document to refer to both a regulatory control period under the NER and an access arrangement period under the NGR.

9 MEU, Optimisation of Asset Base and Use of Fully Depreciated Assets Rule change request, October 2011, pp. 10, 14.

10 In this document, references to "regulatory determination" mean a distribution determination under Chapter 6 of the NER, and revenue determination under Chapter 6A of the NER or an access arrangement decision under the NGR.

The proponent's rule change requests include proposed rules. The electricity proposal covers both electricity distribution and transmission.

1.4 Consultant

The Commission has engaged a consultant, Covec, to provide independent economic advice on the issues raised in the rule change requests. The report produced by Covec can be found on the AEMC's website. Its views are summarised in sections 7.1 and 8.1.

1.5 Commencement of rule making process

On 1 December 2011, the Commission published a notice under section 95 of the National Electricity Law (NEL) and section 303 of the National Gas Law (NGL) advising of its intention to commence the rule making processes and the first round of consultation in respect of the rule change requests. A consultation paper prepared by the AEMC staff identifying specific issues or questions for consultation was also published with the rule change requests. Submissions closed on 20 January 2012.

The Commission received 14 submissions on the rule change requests as part of the first round of consultation. They are available on the AEMC's website.[11] A summary of the issues raised in the submissions and the Commission's response to each issue is contained in Appendix B of this final rule determination in relation to the MEU rule change requests.

1.6 Extension of time

On 16 February 2012 and then on 10 May 2012, the AEMC gave notices under the relevant provisions of the NEL and NGL to extend the period of time for the making of the draft rule determination.

In each case the extension was to ensure that there was adequate time to assess the issues raised in the rule change requests.

1.7 Publication of draft rule determination

On 21 June 2012 the Commission published a draft rule determination in relation to the MEU rule change requests (MEU draft rule determination).[12]

Submissions on the MEU draft rule determination closed on 3 August 2012. The Commission received five submissions. The submissions are available on the AEMC website.

A summary of the issues raised in the submissions on the MEU draft rule determination and the Commission's response to each issue is contained in Appendix C of this final rule determination.

11 www.aemc.gov.au

12 AEMC, optimisation of regulatory asset base and the continued use of fully depreciated assets, draft rule determination, 21 June 2012, Sydney.

2 Commission's considerations (electricity and gas)

In assessing the rule change requests the Commission considered:

- the Commission's powers under the NEL and NGL to make the rule;
- the rule change requests;
- submissions received during first and second rounds of consultation;
- technical advice received from Covec;
- revenue and pricing principles;
- the MEU draft rule determination;
- the AER rule change requests on network regulation submitted by the Australian Energy Regulator (AER).[13]
- the Commission's draft rule determination on network regulation published on 23 August 2012 (network regulation draft rule determination); and[14]
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO and the NGO.

There is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles relating to these rule change requests.[15]

13 References in this document to the AER rule change requests on network regulation mean the Economic Regulation of Network Services Rule Changes, project ERC0134/GRC0011.

14 AEMC 2012, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Draft Rule Determinations, 23 August 2012, Sydney.

15 Under section 33 of the NEL/section 73 of the NGL, the AEMC must have regard to any relevant MCE statement of policy principles in making a rule.

3 Final rule determination (electricity)

3.1 Commission's final determination

In accordance with section 102 of the NEL the Commission has made this final rule determination in relation to the rules proposed by the MEU.

The Commission has determined it should not make the proposed rule.

The Commission's reasons for making this final rule determination are set out in section 3.5.

3.2 Commission's power to make the rule

The Commission is satisfied that the proposed rules fall within the subject matter about which the Commission may make rules. The proposed rules fall within section 34 of the NEL as they relate to section 34(1)(a)(i), the operation of the national electricity market, and section 34(1)(a)(iii), the activities of persons (including registered participants) participating in the national electricity market or involved in the operation of the national electricity system. Further, the proposed rules fall within items 18, 19, 21, 26B, 26C, and 26E of schedule 1 to the NEL as they relate to the principles to be applied, the assessment of investment, the asset base, the depreciation, and rate of return to be considered, by the AER in exercising or performing an economic regulatory function or power relating to the making of a transmission or distribution determination.

3.3 Rule making test

Under section 88(1) of the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NEO. This is the decision making framework that the Commission must apply.

The NEO is set out in section 7 of the NEL as follows:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

For the electricity rule change request, the Commission considers that the relevant aspect of the NEO is the promotion of the efficient investment in electricity services for the long term interests of consumers with respect to price and reliability.[16]

16 Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE Statement of Policy Principles. In this instance, there is no relevant MCE statement of policy principles.

3.4 Other requirements under the NEL

In applying the rule making test in section 88 of the NEL, the Commission has taken into account the revenue and pricing principles as required under section 88B of the NEL as the rule change request relates to matters specified in items 18, 19, 21, 26B, 26C and 26E in schedule 1 to the NEL. Section 3.5 of this final determination sets out how these have been taken into account.

3.5 Summary of Commission's decision

3.5.1 General reasoning

As set out above efficient investment is one of the cornerstones of the NEO. The economic regulation that is applied to electricity distribution and transmission network services takes an incentive-based approach to achieving efficient investment. This means that, rather than the NER setting out prescriptively what expenditure a service provider may undertake, an efficient benchmark level is set and the service provider is given incentives to beat this benchmark.

In the network regulation draft rule determination, the Commission notes that the capex incentive mechanism in the NER could benefit from enhancement. This includes how the regulatory asset base is set and changes over time. While the Commission considers that the NER do not provide electricity network service providers (NSPs) with an incentive to spend more than the allowed capex, there may be an incentive on NSPs to defer capex in an inefficient way. Currently under the NER any capex above the allowance approved by the AER is automatically rolled into the regulatory asset base and is not subject to regulatory scrutiny, which creates a risk that such expenditure may be inefficient. This is being addressed as part of that rule change process.

In considering the capex incentives, it is also important to bear in mind the obligations that electricity NSPs have to provide a service. Regulated businesses, such as the NSPs and some service providers, do not have the same choices and options as competitive businesses. In particular they have an obligation to provide a service to a particular standard, including a reliability standard, that does not exist for most competitive businesses, and regulated businesses are limited in the rate of return that they can earn on their investment. For example, before making a long term commitment a competitive business would usually assess the market and invest only if it formed the view that its likely return would compensate it for the level of risk and allowed a profit. This is not the case for regulated businesses which may be obliged to invest to meet expected demand growth against the risk that demand growth may not eventuate – a risk that is not compensated for in the rate of return applied to regulated businesses such as NSPs and gas service providers.

The Commission is sympathetic to the concerns of consumers that energy prices are rising, and understands that consumers are seeking ways to ensure those prices represent efficient costs. However, the Commission does not consider that the MEU has adequately established that the problems raised in its rule change request warrant the solutions it has proposed. Little empirical evidence has been provided on the extent to which electricity network assets are under-utilised and the theoretical arguments put forward do not reflect the complexity of the relative positions of regulated and

competitive businesses. The position is similar for the "used and useful" assets component (relating to the replacement of fully depreciated assets) of the rule change request.

At a general level the problems raised by the MEU are part of a broader set of the problems raised by the AER in its rule change requests on network regulation that are currently being considered by the Commission. Both the MEU and the AER have identified and are seeking to address the problem that they consider to be of inefficient over-investment in networks. The network regulation draft rule determination provides for a range of solutions that, if made into final rules and applied, would substantially address the MEU's concerns.

In particular, the AER would be given the power to preclude expenditure above the ex ante allowance from being rolled into the Regulatory Asset Base (RAB) where it is not efficient. Another element would require the AER to review and comment on the efficiency of all capex being rolled into the RAB. In addition, there would be an enhanced ability for the AER to develop capex sharing schemes, which could have the effect of equalising the power of the incentive within a regulatory period. The Commission has also proposed changes that would enhance the ability of the AER to set an ex ante capex allowance which is as efficient as possible and, thereby, reduce the potential for over-investment. This includes the ability to undertake benchmarking. The overall effect of these changes would be that it is less likely NSPs would undertake capex which is inefficient.

3.5.2 Consideration of the NEO

The Commission does not consider that the proposed rule would contribute to the achievement of the NEO for the following reasons:

- they could increase risk to service providers and thus provide disincentives for future efficient investment;
- they would likely increase the complexity, costs and resourcing of the regulatory process, reducing its efficiency; and
- they would require the AER to take a too detailed role in approving a service provider's projects and plans.

The Commission's detailed reasoning on the first two points is set out in sections 7.1 and 8.1. Disincentives for future efficient investment may mean that investment that could benefit consumers is not undertaken. This may affect reliability and result in a greater capex in the long run, which affects price. A less efficient regulatory process may increase the costs of the regulator, impacting the price.

In respect of the third point above, the Commission considers it is not appropriate for the regulator to be involved in detailed decisions relating to a service provider's capital program. Under price/revenue regulation, a price or revenue is set ex ante for a regulatory period, regardless of what actual costs during the regulatory period turn out to be. Capex is not allocated to particular projects and it is up to the service provider to manage its projects and its business plan in the most efficient way. The regulator will not have access to the same information about a service provider's network as the business itself, and will not have the same experience of running a network. It should be

the service provider, rather than the regulator, which is responsible for the detailed decisions about what expenditure is to be undertaken. If this is not the case the best decisions may not be made about the network and reliability or price outcomes may suffer.

3.5.3 Consideration of the Revenue and Pricing Principles

The Commission also considers the revenue and pricing principles discussed below are relevant.

Principle 6 provides that regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in an asset with which the service provider provides services. In respect of optimisation of the asset base, if the proposal from the MEU was implemented, it would send a signal to service providers not to invest in assets with a higher chance of becoming redundant. Even if, as the MEU acknowledges, some assets that are not being used should be retained in the asset base, the Commission agrees that the proposal should result in the overall degree of utilisation of assets in the system increasing to some extent; in respect of the continued use of fully depreciated assets, efficient utilisation means service providers only replace an asset at a time close to the end of its functional life. The proposals are likely to result in service providers retaining more assets in service for longer since service providers may not have been allowed capex for their replacement.

However, the MEU rule change requests, if implemented, would create a risk of under-investment (Principles 2 and 5). Principles 2 and 5 of the revenue and pricing principles refer to promoting efficient investment in networks/pipelines and the potential for under or over-investment. Optimisation might provide signals to service providers not to invest even if the investment is efficient over the longer term due to considerations of economic scale and forecast growth. In addition, a service provider may also be reluctant to make investment for improving reliability if it is concerned that this investment could be optimised out of the asset base in future. In respect of over-investment, in the directions paper for the AER rule change requests on network regulation, the AEMC stated that the "capex incentives in the NER do not create an incentive for a NSP to spend more than its allowance in its regulatory determination".[17] Moreover, leaving the incentives in the rules to one side, the MEU has not mentioned capital constraints that may restrict the business's ability to undertake expenditure.

Therefore, while there may be some benefits in terms of the overall utilisation of networks (Principle 6), the proposed rules are likely to have a negative impact on incentives for investment (Principles 2 and 5). In addition, the current arrangements already provide disincentives for inefficiency and over investment (Principles 2 and 5). On the whole, the proposed rule would not contribute to achieving the revenue and pricing principles.

17 AEMC, Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services, Directions Paper, 2 March 2012, Sydney, p. 40.

4 Final rule determination (gas)

4.1 Commission's final determination

In accordance with section 311 of the NGL the Commission has made this final rule determination in relation to the rules proposed by MEU.

The Commission has determined it should not make the proposed rule.

The Commission's reasons for making this final rule determination are set out in section 4.5.

4.2 Commission's power to make the rule

The Commission is satisfied that the proposed rules fall within the subject matter about which the Commission may make rules. The proposed rules fall within section 74 of the NGL as they relate to section 74(1)(a)(i), access to pipeline services, section 74(1)(a)(ii), the provision of pipeline services, and section 74(1)(a)(iii), the activities of registered participants, users, end users and other persons in a regulated gas market. Further, the proposed rules fall within items 43, 44, and 45 of schedule 1 to the NGL as they relate to the capital base, the assessment, or treatment of, investment in covered pipelines and new facilities, and the economic framework and methodologies to be applied by the regulator or the dispute resolution body.

4.3 Rule making test

Under section 291(1) of the NGL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NGO. This is the decision making framework that the Commission must apply.

The NGO is set out in section 23 of the NGL as follows:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas."

For the gas rule change request, the Commission considers that the relevant aspect of the NGO is the promotion of the efficient investment in natural gas services for the long term interests of consumers with respect to price, quality, safety, reliability and security of supply.[18]

4.4 Other requirements under the NGL

In applying the rule making test in section 291 of the NGL, the Commission has taken into account the revenue and pricing principles as required under section 293 of the

18 Under section 291(2), for the purposes of section 291(1) of the NGL the AEMC may give such weight to any aspect of the NGO as it considers appropriate in all the circumstances, having regard to any relevant MCE Statement of Policy Principles. In this instance, there is no relevant MCE statement of policy principles.

NGL as the rule change request relates to matters specified in items 43, 44, and 45 of schedule 1 to the NGL.

4.5 Summary of Commission's decision

4.5.1 General reasoning

As set out above efficient investment is one of the cornerstones of the NGO. The economic regulation that is applied to gas pipelines takes an incentive-based approach to achieving efficient investment. This means that, rather than the NGR setting out prescriptively what expenditure a service provider may undertake, an efficient benchmark level is set and the service provider is given incentives to beat this benchmark.

The NGR provide for scrutiny of capex both before and after it is undertaken. Beforehand, the regulator approves the benchmark level of capex. Afterwards, the regulator may exclude from the asset base any capex which was not prudent or efficient. In addition, the regulator may include in an access arrangement a mechanism to remove redundant assets from the asset base.

In considering the capex incentives, it is also important to bear in mind the obligations that gas service providers have to provide a service. These obligations come from, among other things, reliability and gas quality standards that apply in each jurisdiction. To a certain extent, a gas service provider is obliged to invest in order to meet these reliability standards.

The Commission is sympathetic to the concerns of consumers that energy prices are rising, and understands that consumers are seeking ways to ensure those prices represent efficient costs. Given this overall view, the Commission does not consider that the MEU has adequately established that the problems raised in its rule change request warrant the solutions it has proposed. Little empirical evidence has been provided on the extent to which gas pipeline assets are under-utilised and the theoretical arguments put forward do not reflect the complexity of the relative positions of regulated and competitive businesses. The position is similar for the "used and useful" assets component of the rule change request (which relates to fully depreciated assets).

For both aspects of the rule change request, submissions highlighted how the current NGR arrangements work. The scrutiny of capex described above does not appear to be given sufficient weight by the MEU.

4.5.2 Consideration of the NGO

The Commission does not consider that these rules would contribute to the achievement of the NGO for the following reasons:

- they could increase risk for service providers and thus provide disincentives for future efficient investment;
- they would likely increase the complexity, costs and resourcing of the regulatory process, reducing the efficiency of the process;
- the NGR already include mechanisms which could be used to address the MEU's concerns; and

- they would require the regulator to take a too detailed role in approving a service provider's projects and plans.

The Commission's detailed reasoning on the first three points is set out in sections 7.1 and 8.1.

Disincentives for future efficient investment may mean that investment that could benefit consumers is not undertaken. This may affect reliability and result in a greater capex in the long run, which affects price. A less efficient regulatory process may increase the costs of the regulator, impacting the price.

In respect of the last point above, the Commission considers it is not appropriate for the regulator to be involved in detailed decisions relating to a service provider's capital program. Under price/revenue regulation, a price or revenue is set ex ante for a regulatory period, regardless of what actual costs during the regulatory period turn out to be. Capex is not allocated to particular projects and it is up to the service provider to manage its projects and its business plan in the most efficient way. The regulator will not have access to the same information about a service provider's pipeline as the business itself, and will not have the same experience of running a network. It should be the service provider, rather than the regulator, which is responsible for the detailed decisions about what expenditure is to be undertaken. If this is not the case the best decisions may not be made about the network and reliability or price outcomes may suffer.

4.5.3 Consideration of the Revenue and Pricing Principles

The Commission also considers that the revenue and pricing principles discussed below are relevant.

Principle 6 provides that regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in an asset with which the service provider provides services. In respect of optimisation of the asset base, if the proposal from the MEU was implemented, it would send a signal to service providers not to invest in assets with a higher chance of becoming redundant; in respect of the continued use of fully depreciated assets, efficient utilisation means service providers only replace an asset at a time close to the end of its functional life. The proposals are likely to result in service providers retaining more assets in service for longer since service providers may not have been allowed capex for their replacement.

However, the MEU rule change requests, if implemented, would create a risk of under-investment (Principles 2 and 5). Principles 2 and 5 of the revenue and pricing principles refer to promoting efficient investment in networks/pipelines and the potential for under or over-investment. Optimisation might provide signals to service providers not to invest even if the investment is efficient over the longer term due to considerations of economic scale and forecast growth. In addition, a service provider may also be reluctant to make investment for improving reliability if it is concerned that this investment could be optimised out the asset base in future. In respect of over-investment, after a regulatory determination is made a service provider's revenue is fixed and it retains the benefit of any underspend and bears the costs of an overspend. This provides a strong incentive to minimise expenditure, particularly in respect of overspends where the service provider will bear the financing costs of its investment

until the start of the next regulatory period. In other words, the service provider would lose the time value of its capital. Moreover, leaving the incentives in the rules to one side, the MEU has not mentioned capital constraints that may restrict the business's ability to undertake expenditure. Furthermore, additional mechanisms relevant to the problems identified by the MEU exist in the NGR. The first of these is rule 85, which gives the regulator the power to include a capital redundancy mechanism in an access arrangement. The second of these is the ex post prudency review available to the regulator as part of rule 77 which excludes capex which is not prudent or efficient from the asset base.

Therefore, while there may be some benefits in terms of the overall utilisation of networks (Principle 6), the proposed rules are likely to have a negative impact on incentives for investment (Principles 2 and 5). In addition, the current arrangements already provide disincentives for inefficiency and over investment (Principles 2 and 5). On the whole, the proposed rule would not contribute to achieving the revenue and pricing principles.

5 Commission's assessment approach (electricity and gas)

This chapter describes the Commission's approach to assessing the rule change requests in accordance with the requirements set out in the NEL and NGL (and explained in chapters 3 and 4).

In assessing any rule change request against the NEO and NGO the first step is to consider the counterfactual arrangements against which the rule change is being compared. In the present case the counterfactual arrangements are the current provisions under the rules. The current rules are summarised in Appendix A of this final rule determination. The rule change requests have also been considered in the context of the network regulation draft rule determination.

In assessing these rule change requests, the Commission has considered the following factors:

- recovery of efficient costs – whether the proposed rules are likely to allow network/pipelines businesses to fully recover the efficient level of costs required to deliver secure and reliable supply to customers;
- efficient utilisation – whether the proposed rules would ensure actual costs which are rolled into the asset base reflect actual utilisation of an asset, and provide the appropriate signals for efficient utilisation;
- investment incentives – whether the proposed rules would have an impact on incentives to invest in services that would benefit customers: first, by the reduction of the asset base through creating disincentives for replacing fully depreciated assets that are still useful; and secondly, by the reduction of the asset base where the value of assets would be based on the degree of their utilisation. It is relevant to consider whether this increased investment risk could justify a higher cost of capital; and
- regulatory process - whether the proposed rules would create complexity or uncertainty in the regulatory process: firstly, by requiring the regulator to assess whether assets are redundant with service providers being required to demonstrate that the asset is at the end of its functional life; and secondly, by requiring the regulator to assess whether assets are under-utilised with service providers being required to show how much an asset has been utilised.

6 General comments

This chapter sets out the general comments coming out of the submissions on the MEU draft rule determination and the Commission's response to those comments. This chapter also sets out the interaction between the network regulation draft rule determination and the MEU rule change requests in general.

6.1 Draft rule determination

In the MEU draft rule determination the Commission described the overall approach to incentive regulation. Regulation is intended to mimic as far as reasonably possible the incentives in a competitive market. The AEMC recognises that in certain ways regulated businesses do not have the same choices and options as companies in a competitive market. In particular, they have obligations to provide a service that does not exist for most competitive businesses, and they are limited in the rate of return they can earn on their investments.

The Commission observed that the proposed rules would require the regulator to take a too detailed role in approving a service provider's projects and plans. Under the form of incentive regulation in the NER and NGR, capex is not allocated to particular projects and it is up to the service provider, not the regulator, to manage its projects and assets, and its business plan in the most efficient way.

In addition, the MEU draft rule determination set out that Commission was looking at capex incentives at a general level as part of the AER rule change requests on network regulation. Broadly speaking, the MEU's concerns regarding inefficient investment being permitted parallel those concerns coming out of the AER's rule change requests on network regulation.

6.2 Submissions

Second round submissions from service providers or their representatives are generally supportive of the Commission's approach set out in the MEU draft rule determination. Aurora considers that the AEMC has provided a balanced assessment of the MEU proposals and the submissions from stakeholders.[19]Australian Pipeline Industry Association Ltd. (APIA) submits that the MEU has not adequately established that the specific problems raised in its rule change requests exist and there is absence of evidence of the existence of the MEU concerns.[20] Jemena and Grid Australia support the conclusions of the MEU draft rule determination.[21]

However, the MEU raises a number of general issues in its response to the draft rule determination and does not support the AEMC's position in the draft rule determination.

19 Aurora, Draft Rule Determination submission, p. 1.

20 APIA, Draft Rule Determination submission, p. 2.

21 Jemena, Draft Rule Determination submission, p. 1; Grid Australia, Draft Rule Determination submission, p. 1.

- The MEU submits that the AEMC's view that a regulated service provider has higher performance standards than those in competitive markets is an incorrect assumption. In addition, the MEU submits that the draft rule determination has taken the wrong view that the reliability of supply needs to take primacy regardless of the costs to consumers.[22]
- In respect of the request for further evidence of a problem, the MEU states that it is impossible to provide specific evidence to support the proposed rule changes because any specific evidence would be held by service providers. It says this is a problem with the Commission's approach to rule changes in general. Despite this, it claims that the Commission has accepted assertions without evidence from other stakeholders and Covec.[23]
- The MEU describes the way in which a service provider can make a profit and concludes that there is an incentive for over-investment.[24] It submits that the conclusion that there are no incentives for service providers to over invest is not supported by independent review or theoretical argument.[25]

6.3 Commission's analysis

The Commission has considered the issues raised by stakeholders. Below are the Commission's considerations on the general issues raised above.

6.3.1 AER rule change requests on network regulation

In the MEU draft rule determination, the Commission noted that in respect of electricity the Commission's work on the AER rule change requests on network regulation[26] may address some of the MEU's concerns at a general level. In response the MEU has stated that it is concerned that the Commission has referred to this rule change process without setting out the Commission's position.

The Commission identified the problems it intended to address in respect of capex incentives for electricity in the directions paper for the network regulation rule changes published in March 2012. These were the incentive to defer capex during a regulatory control period and the lack of scrutiny of capex. The MEU's second round submission[27] stated that the MEU draft rule determination did not test the assertion that there is a continuous disincentive to overinvest, although the MEU notes that there is an incentive to under-invest during a regulatory control period. The AEMC agrees with this view partly in that the incentive power not to over-invest declines throughout a regulatory period. Detailed analysis in the network regulation draft rule determination explains why, in the AEMC's view, the NER create no incentive to over-invest.

22 MEU, Draft Rule Determination submission, p. 7.

23 Id, pp. 3, 12-14, 28.

24 Id. p. 10.

25 Id, p. 16.

26 AER, Rule change request Part A, Part B and Part C, 29 September 2011.

27 MEU, Draft Rule Determination submission, p. 11.

In the network regulation draft rule determination the Commission has proposed to provide the AER with a number of tools that it may apply to provide adequate incentives for NSPs to incur capex efficiently. These are:

- capex sharing schemes;
- efficiency reviews of past capex;[28]
- the use of actual or forecast capex to depreciate the RAB.

In developing the tools and its overall approach the AER would have to have regard to a capex incentive objective. The objective is that only capex that is efficient should be rolled into the RAB. The AER would also be required to take into account principles and factors in developing and applying the tools. Importantly, under the proposal it would be up to the AER as to how these tools should be applied.

If the network regulation draft rule determination is confirmed in the final determination and the approach above is implemented by the AER, the tools will address the broader issue of over investment raised by the MEU in a number of ways:

- Capex sharing schemes would allow the AER to attach financial consequences to NSPs that spend more than their allowance and thereby discourage over-investment.
- Efficiency reviews of past capex would allow the AER to preclude expenditure above the ex ante allowance from going into the RAB where it is not efficient. This would allow the AER to prevent a NSP from recovering inefficient costs from consumers. It would also discourage NSPs from over investing in the first place as the NSP would be at risk of not being able to recover the investment. A statement on the efficiency of capex being rolled into the RAB would make public capex decisions of a NSP which were not efficient. This should also act as discouragement from over investing.
- Giving the AER the discretion to use actual or forecast capex to depreciate the RAB would also provide a means by which the AER could discourage over-investment.

The AER could tailor its approach to individual NSPs. Thereby, the AER could provide for stronger incentives to not over invest where a NSP tends to spend more than its allowance and weaker incentives for those that do not.

The Commission has also proposed to improve the clarity and remove ambiguities regarding the ability of the AER to scrutinise, and if necessary amend, proposed capex as part of the determination process to set efficient allowances in the first place. This includes the use of benchmarking. In addition, it has proposed that the AER be required to publish annual benchmarking reports, setting out the relative efficiencies of network businesses. These proposed changes would help to ensure that the ex ante capex allowance set by the AER is efficient. This could help to address over-investment and

28 The AER will be required to undertake these reviews for all NSPs. However, it can only reduce the RAB following a review where a NSP has spent more than its allowance. In addition, it may only reduce the RAB up to the amount which the NSP overspent by.

also enhance the ability of the AER to reject the replacement of assets which are still useful where this is not efficient.

The network regulation draft rule determination was published on 23 August 2012. The MEU has an opportunity to make submissions as part of that process.

These rule changes only relate to electricity and not gas. As set out in the MEU draft rule determination[29] in respect of gas there are already mechanisms in the NGR which could be used by the AER to address the MEU's concerns.

6.3.2 Lack of evidence

The MEU has stated that it is impossible for it to provide evidence of the problems it has raised in response to the Commission's request in the MEU draft rule determination. This is because this information tends to be held by the service providers.[30]

While the difficulties faced by the MEU are understandable, the AEMC's general approach is to require a rule proponent to substantiate a problem it identifies. It is important for regulatory certainty that the NER or NGR are not changed in the absence of a problem. Evidence can be provided in a number of different forms. It may be quantitative or qualitative, for example, Covec undertook a survey of the use of optimisation in other jurisdictions.

In respect of the MEU's comment that the same requirement to provide evidence is not applied to stakeholders providing submissions, more probative value would be placed on submissions that are accompanied by evidence. At the same time, since rule proponents are actually seeking to change rules the need for accompanying evidence is more critical.

The MEU has also claimed that the Commission has not required Covec to provide supporting evidence for its reviews.[31]In fact, Covec has provided qualitative analysis to support its views on the rule changes proposed by the MEU. For example, in the Appendix to its report,[32] Covec undertook a survey of the use of optimisation in other jurisdictions.

6.3.3 Balancing different considerations

The Commission accepts many of the potential benefits that would arise from the rule changes proposed by the MEU, such as a potential increase in the level of utilisation of the network. In general, though, these benefits are outweighed by the disadvantages likely to flow from the proposed changes as discussed in sections 3.5 and 4.5.

The MEU's submission has focused on specific elements of the MEU draft rule determination without always noting the balancing exercise. For example, the MEU submits that the MEU draft rule determination places too much emphasis on reliability and too little on cost. In fact, the impact on investment was just one of the

29 AEMC, optimisation of regulatory asset base and the continued use of fully depreciated assets, draft rule determination, 21 June 2012, Sydney, p. 9.

30 MEU, Draft Rule Determination submission, pp. 3, 13, 14, 28.

31 Id, p. 3.

32 Covec, Initial views on rule changes proposed by MEU, 6 February 2012, pp. 18-19.

considerations on which the decision not to make a draft rule was based. Others included the increased complexity of the regulatory process, and the fact that the MEU's rule change requests would require a project-by-project or asset-by-asset analysis by the AER.

The MEU also refers to the costs and risks of over and under-utilisation. Again, this principle was expressly considered in the draft rule determination where it was noted that the overall utilisation of the network should be increased.[33] Considered alongside some of the disadvantages described above, however, this factor was not enough to outweigh the considerations against the MEU's proposal.

6.3.4 Regulated monopolies vs competition

Finally, the MEU has rejected the notion that a firm in a competitive market has a lower level of reliability than a regulated monopoly.[34] The MEU states that a firm in competition must meet standards of performance or lose customers to competitors. The Commission accepts this point, but maintains its view that competitive firms have a choice and that a regulated monopoly has less flexibility in its business as it is required by law to provide certain services at prescribed standards. As set out in the MEU draft rule determination and covered above in chapter 6, an electricity or gas service provider may have to invest even if it did not expect to return a profit from that investment. In addition, a regulated monopoly may have fewer options available where customers cease to use its services and assets become stranded.[35]

33 MEU, Draft Rule Determination submission, p. 23.

34 Id, p. 7.

35 AEMC, Optimisation of Regulatory Asset Base and the Continued Use of Fully Depreciated Assets, Draft Rule Determination, 21 June 2012, Sydney, pp. 20-21.

7 Optimisation of the asset base

This chapter sets out the AEMC's consideration of issues raised in response to the MEU draft rule determination regarding the first part of the MEU's rule change requests - optimisation of the asset base.

Under the NER, the asset base is rolled forward from one regulatory control period to the next. There is neither a requirement for an ex post asset utilisation review (nor an ex post prudency review) by the AER, nor a requirement for the asset base to be adjusted according to the degree of utilisation of an asset.

Similarly in gas, the asset base is rolled forward from one regulatory control period to the next. The regulator may reduce the amount of capex rolled forward based on a prudency test. However, there is no automatic optimisation of the asset base. There is also a capital redundancy provision in NGR, but this is a discretionary provision and there is no automatic provision that excludes these assets from the asset base.

Therefore, the MEU states that there is an implicit incentive on a service provider to maximise its asset base, and therefore profit by building assets which are too large. The proposed rules aim to address this by introducing ex post optimisation for these assets.

The rule change requests would require the regulator to review periodically 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. This means that only assets actually used at an appropriate level of optimisation would be allowed to be included in the asset base.

7.1 Draft rule determination

In the MEU draft rule determination the Commission did not consider the problem of under-utilisation of network and pipeline assets has been established at a theoretical level. In respect of electricity, capex incentives in the NER do not create an incentive for a NSP to spend more than its allowance in its regulatory determination. Moreover, the constraints on capital may restrict the business's ability to undertake expenditure.

The Commission recognises that there are certain benefits from the proposed ex post optimisation of assets. The rule change requests from the MEU may increase utilisation of assets to an extent. The risk of service providers not recovering costs under the MEU rule change is likely to be low in the long term on the basis that they should be compensated for any added risks through the cost of capital.

However, the benefits of optimisation are outweighed by the potential risks and costs. While optimisation would put pressure on service providers to reduce inefficient investment, it may also provide signals to service providers not to invest even if the investment is efficient over the longer term due to considerations of economic scale and forecast growth. Moreover, optimisation would increase the complexity and costs of the regulatory process.

If ex post optimisation of the asset base is implemented as proposed by the MEU, this would provide a signal to discourage service providers from undertaking capex that has a higher risk of being under-utilised. This is because of the risk of stranding of assets through ex post optimisation, that is, the risk that they would not roll into, or be

removed from, the asset base. Therefore, the risks associated with investment would increase. A higher rate of return that would apply to total assets would be required to compensate for this increased risk of assets not rolling into or being removed from the asset base. This may increase costs for consumers.

Moreover, the Commission agrees that ex post optimisation would increase the complexity and costs of the regulatory process.

First, under this approach, at each reset the regulator would be required to consider the degree of utilisation of every asset in the asset base. This is a task that would require significant regulator resources, as well as data from service providers. The regulator may also be required to carry out independent audits or checks of assets in order to verify the accuracy of service provider's data concerning the extent of utilisation of assets. This would require significant time to undertake, noting the regulator is already time constrained under the current regulatory process.

Secondly, if optimisation were to be implemented, the AEMC considers that good regulatory practice would imply that transparency and consistency need to be provided to regulated businesses. Therefore detailed rules about how optimisation is to be undertaken would need to be in place in advance and clear guidelines from the regulator would need to be prepared to assist implementation. Covec also agrees there would be a need for guidelines, and that this would need to be assessed (by the regulator presumably) every time a change to the guidelines is requested. This would add to the regulatory burden.

In electricity, the MEU draft rule determination noted that changes being considered as part of the response to the AER rule change requests may address, at a general level, some of the MEU's concerns. These changes are discussed further at section 6.3.1 above.

In respect of gas, the MEU draft rule determination stated that there are relevant mechanisms to the problems identified by the MEU exist in the NGR. Rule 85 gives the regulator the power to include a capital redundancy mechanism in an access arrangement. Rule 77 provides for an ex post prudency review which allows the AER to exclude capex that is not prudent or efficient from the asset base. The NGR already provide incentives to promote economic efficiency and prevent over-investment.

With respect to the MEU's optimisation approach, Covec's overall view is that if over-investment is perceived to be a real problem, ex post optimisation is not a good way of dealing with it due to the backward looking nature of the approach, the increase in implementation costs, the negative impact on efficient investment, and the risk of not being able to recover efficient costs. Covec observes that ex post optimisation is not currently used in many jurisdictions and suggests that there may be other less costly and intrusive ways to address this problem raised by the MEU. The efficiency sharing approach used in the UK by Ofgem is one example of an alternative to ex post optimisation.[36]

36 Covec, Initial views on rule changes proposed by MEU, 6 February 2012, p. I.

7.2 Submissions

Second round submissions from service providers or their representatives are supportive of the AEMC's position in relation to ex post optimisation of the asset base. In particular, APIA addresses the significant additional cost that would be caused by the MEU's proposed approach to pipelines and the significant workload to the regulator and service providers that would be associated with this approach.[37] Moreover, APIA submits that it does not consider the MEU's rule change proposals could provide any benefit to the overall utilisation of gas networks as the NGR already has a mechanism that addresses the concerns raised by the MEU.[38]

However, the MEU is in general opposed to the Commission's position in the MEU draft rule determination. Among other things, the MEU has identified further benefits of optimisation, as follows:

- the proposed optimisation rule change imposes a discipline on the use of ex ante capex allowances;[39]
- if an investment was based on certain forecast costs then there is a driver for the project to be undertaken using those costs only;[40] and
- optimisation prevents consumers from having to pay for assets that are no longer used.[41]

The MEU also raises a number of other issues in its submission as follows:

- The MEU submits that the AEMC is "allowing uncontrolled investment" under current rules.[42]
- The MEU accepts the philosophy that if the risk was increased there would have to be a compensating adjustment in the Weighted Average Cost of Capital (WACC). However, it points out that this type of adjustment was not undertaken in the AEMC's past actions or in the development of the risk factor used by the AER. It submits that the draft rule determination focuses too much on the risk to service providers as a result of optimisation. At the same time, the financial benefits of the proposals have not been given enough weight.[43]
- The MEU states that optimisation imposes a discipline on a NSP not to oversize. It states that a time frame needs to be established and standard sizes of equipment need to be defined. It suggests that undersized assets could be avoided by the provision of guidelines which allow for acceptable oversizing in the interests of future consumers.[44]

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37 APIA, Draft Rule Determination submission, p. 2.

38 Id, p. 2.

39 MEU, Draft rule determination submission, p. 18.

40 Id, p. 18.

41 Id, p. 19.

42 Id, p. 3.

43 Id, p. 9.

44 Id, pp. 20-21.

7.3 Commission's analysis

This section provides the Commission's analysis in response to the above specific issues raised by the MEU. Many issues raised by the MEU were discussed in the MEU draft rule determination[45] as summarised in section 7.1 above.

7.3.1 Response to the specific points raised by the MEU

The Commission does not accept that the current rules provide incentives for uncontrolled investment for the following reasons.

Uncontrolled investment

First, the incentive regime generally creates incentives against uncontrolled investment. In respect of electricity, the overall capex incentive mechanism has been discussed in chapters 6 and 7 in the MEU draft rule determination. This creates a disincentive to overspend and an incentive to underspend during a particular regulatory period. This is similar to gas. There are already mechanisms that exist under the NGR which would be used to address the specific concerns of the MEU.

Secondly, as discussed in the MEU draft rule determination, most service providers do not have access to an excessive supply of capital and are likely to have to raise debt to fund new investment.[46]

In addition, the MEU's own proposal would not have the effect of controlling investment. Any exclusion of an asset from the asset base would occur some time after the investment is made and the asset is built. If the MEU's concern is controlling investment, its proposal would only indirectly achieve this.

WACC Adjustments

In respect of the MEU's comment about the compensation adjustment to the WACC, the Commission maintains its position that the MEU's approach would appear to have the effect of transferring more of the risks for assets becoming redundant to service providers. This would then likely drive up the WACC. For example, some capex may be deemed efficient at the time it is incurred on the basis of information available at the time, but due to a change in market conditions the relevant assets may become redundant. Thereby costs that were approved as efficient on an ex ante basis would not be recovered. As the allowed rate of return for service providers is determined based on the level of risk involved in investing in network assets, the Commission takes the view that it is likely that an adjustment to the risk-adjusted rate of return of the network would be required if optimisation is implemented. The issue about how to address the risk and benefit through the setting of cost of capital has been explored as part of the process for the AER rule change requests on network regulation. The network regulation draft rule determination proposes the AER to have an enhanced ability to set the best possible estimate on the rate of return.

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45 For the details please refer to sections 6.2, 7.5.1 and 8.5.1 of the draft rule determination on the MEU rule change requests.

46 AEMC, optimisation of regulatory asset base and the continued use of fully depreciated assets, draft rule determination, 21 June 2012, Sydney, p. 22.

The MEU claims that the value of the equity beta currently used by the AER is conservative.[47]The Commission has not formed a view on whether the equity beta is conservative or not but notes this has been a decision for the AER. If the draft rules that were published with the network regulation draft rule determination are made as final rules, the AER would have an enhanced ability to set the best possible estimate on the rate of return.

Benefits of optimisation

Finally, the MEU has set out at pages 17-21 of its submission the benefits of optimisation. Some of these were set out in the original rule change request. The Commission accepts many of these benefits. For example, a clear common understanding about the time frame and standard sizes of equipment would contribute to the transparency of the regulatory process. Optimisation would also provide more discipline on a service provider contemplating the construction of new assets. In general though, benefits are outweighed by the potential disadvantages of optimisation.

7.3.2 AER rule change requests on network regulation

As noted above, in respect of electricity if the draft rules published with the network regulation draft rule determination are made as final rules, the AER will be provided with a number of tools that it may apply to provide incentives for NSPs to incur capex efficiently. While the proposals contained in the network regulation draft rule determination do not specifically allow the RAB to be optimised at each regulatory determination, if they are applied the likelihood of under-utilised assets would be smaller going forward. This is because, if implemented, these proposals would likely to lead to more efficient expenditure by NSPs. In turn, efficient expenditure would less likely result in under-utilised assets.[48]

47 MEU, Draft Rule Determination submission, p. 8.

48 Utilisation of assets would be considered in an efficiency assessment.

8 Continued use of fully depreciated assets

This chapter sets out the AEMC's consideration of issues raised in response to the MEU draft rule determination regarding the second part of the MEU's rule change requests - continued use of fully depreciated assets. For an asset that has been fully depreciated, the MEU proposes that the regulator may only approve the replacement of this asset if the asset has passed its useful life and cannot be used productively for further service.

8.1 Draft rule determination

The MEU draft rule determination characterised the problems raised by the MEU regarding used and useful assets as follows: a service provider has an incentive to seek approval of an allowance to replace a fully depreciated asset in order to maintain a revenue stream from the asset; and the rules do not impose sufficient "checks" on the service provider doing this.

In the MEU draft rule determination the Commission took the view that while there may be certain benefits to a service provider in retaining a revenue stream from an asset being used to provide a service, there appear to be a number of countervailing factors which mean this effect is less significant. For example, most service providers do not have an unlimited supply of capital with which to fund asset replacement.

In respect of the second half of the problem, it was accepted in the MEU draft rule determination that the rules do not currently prohibit the regulator from approving, on an ex ante basis, capex for a service provider to replace an asset which is still functional. The regulator does, however, set a capex allowance which it believes reasonably reflects the efficient costs of a prudent operator.

In respect of the assessment factors, the MEU draft rule determination recognises that while the MEU's proposals would to some extent achieve greater utilisation of the network, it is unclear whether this increased utilisation would in all circumstances be efficient. The MEU's proposal would not have a significant effect on the overall investment incentives for service providers since the capex allowance for the replacement is to be determined ex ante, and this would still leave the service provider with a decision as to whether to proceed with the investment. However, similar to the proposed rules in respect of optimisation, these proposed rules would increase the complexity and the costs in the regulatory process and impose a significant additional burden on the regulator.

The proposed rules would increase the complexity and the costs in the regulatory process. First, detailed rules would need to be provided in advance and some guidance would need to be provided to assist the implementation.

In addition, the rule could impose a significant additional burden on the regulator. The regulator would be required to assess ex ante whether an asset which a service provider seeks to replace is still useful. This would oblige the regulator to assess the network/pipeline on an asset by asset basis, a task which would require more time and resources. It would also require the regulator to make engineering-style assessments of a service provider's assets, as noted by Ausgrid and the ENA. It would likely require more data than the regulator currently uses.

In respect of the replacement of assets which are fully depreciated but still useful, Covec considers that the source of the issue is the prediction error. It takes the view that asset lifetimes could be under- or over- estimated, and that these errors occur with approximately equal probabilities. To ensure consumers and firms are treated equally, both early death and long-lived assets could be dealt with through regulatory measures. Alternatively, treatment would also be symmetrical if neither is dealt with through regulatory measures. Covec is concerned that the proposal of the MEU is asymmetrical as it only deals with long-lived assets.[49]

In addition, Covec sees incompatibilities between the MEU's ex ante approach in respect of fully depreciated assets and the ex post approach taken in respect of optimisation.[50]

Finally, Covec notes that the approach to fully depreciated assets proposed by the MEU has been applied in some jurisdictions internationally. However, its use has not been extensive, and when applied it has been controversial.[51]

8.2 Submissions

The second round submissions from service providers are supportive of the Commission's position in respect of continued use of fully depreciated assets. However, the MEU does not support the MEU draft rule determination.

The MEU submits that there are insufficient controls on capex or incentives to ensure it is efficient.[52]

The MEU submits that service providers are rewarded for the deferral of replacement capital in the short term. At the same time, though, the longer term benefit from replacing the asset is much greater to the service provider. The MEU states that the financial benefits of its proposals have not been given enough weight.[53] It also submits that the rules provide no requirements on a NSP to use capex to deliver functional benefits.[54]

The MEU states that the Commission's observation in the MEU draft rule determination that the AER has the ability to change depreciation schedules is not correct.[55]

The MEU also states that there would be no significant burden in respect of the regulatory process if the proposed rules to be implemented.[56]

49 Covec, Initial views on rule changes proposed by MEU, 6 February 2012, p. 11.

50 Id, p. 13.

51 Id, pp. 13-14.

52 MEU, Draft Rule Determination submission, p. 33.

53 Id, pp. 28, 34.

54 Id, p. 33.

55 Id, p. 34.

56 Id, p. 35.

8.3 Commission's analysis

8.3.1 Response to the specific points raised by the MEU

The MEU draft rule determination considered both the costs and the benefits of the proposed rules. However, as discussed in that determination any benefits are outweighed by the potential costs and risks.

The Commission does not accept that the current rules provide incentives for uncontrolled investment. This has been discussed in chapter 7 above. To expand on the points raised there, the Commission accepts that nothing in the NER or NGR requires a service provider to use capex to deliver functional benefits. How the service providers allocate their regulated revenue is up to them, and this is an important part of how the incentive regime works. The service provider should only be provided with an ex ante allowance that allows it to recover its efficient costs. Since the service provider must comply with certain reliability obligations and other obligations such as safety and quality, it is likely capex would be focused on assets that assist it to achieve these obligations.

In respect of the ability of the regulator to reject a service provider's depreciation schedules, the MEU states that there are elements of the reasoning that are not correct. The Commission however maintains its view from the MEU draft rule determination that it is an option for the AER to reject a depreciation schedule.

There is an example to show that the AER was able to reject the proposed depreciation schedules from service providers and provide a substitute for the schedule. The AER rejected TransGrid's proposed depreciation schedules in the final transmission determination for TranGrid for the period 2009-10 to 2013-14. The AER decided not to accept the reduced standard asset lives proposed for the replacement asset category of asset classes. As a result the AER itself determined TransGrid's depreciation schedule and recalculated the depreciation allowance for the final decision in accordance with clause 6A.6.3(a)(2)(ii).[57]

The Commission does not agree with the MEU that there would be no significant additional burden in respect of the regulatory process if the MEU's proposed rules were implemented. Assuming the data is held by the service provider as the MEU claims, the service provider would still have to justify that every asset being replaced was not functional. The AER would have to review every asset that is being replaced to determine if it had life left. In addition to the burden this would create, it would force the regulator to set the ex ante allowance on the basis of a highly detailed engineering analysis. This would be quite a different approach to setting the ex ante allowance since the current approach is based on the regulator setting a total allowance, rather than having to approve individual projects. In respect of electricity, it is noted that in the network regulation draft rule determination the Commission has clarified the ability for the AER to set the ex ante allowance based on a top down analysis, including benchmarking, rather than being confined to a bottom up analysis of the type that would be a consequence of the MEU's proposal.

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57 AER, TransGrid transmission determination 2009-10 to 2013-14, Final decision, 28 April 2009, pp. 107-111.

8.3.2 AER rule change requests on network regulation

As described above, in respect of electricity the network regulation draft rule determination, if confirmed in the final determination, would clarify the discretion the AER has to set an ex ante capex allowance for a NSP. It would also require the AER to conduct reviews of the efficiency of past capex.

Abbreviations

AEMC	Australian Energy Market Commission
AEMC or Commission	Australian Energy Market Commission
AER	Australian Energy Regulator
APIA	Australian Pipeline Industry Association Ltd.
Capex	capital expenditure
COAG	Council of Australian Governments
MCE	Ministerial Council on Energy
MEU	Major Energy Users Inc.
NEL	National Electricity Law
NEO	National Electricity Objective
NER	National Electricity Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NSPs	network service providers
RAB	Regulatory Asset Base
SCER	Standing Council on Energy and Resources
WACC	Weighted Average Cost of Capital

A Summary of current rules processes

This appendix provides an overview of the current processes under the rules with respect to rolling forward the asset base, including the treatment of redundant assets and depreciation schedules.

Optimisation of asset base

Electricity

Under the NER, the asset base is rolled forward from one regulatory control period to the next. The amount by which the asset base is increased is based on the total capex undertaken by the NSP during the previous regulatory control period. There is no requirement for an ex post asset utilisation review (nor an ex post prudency review) by the AER, nor a requirement for the asset base to be adjusted according to the degree of utilisation of an asset.

Gas

Similarly in gas, the asset base is rolled forward from one access arrangement period to the next. The starting point is the total actual capex incurred in the previous access arrangement period. The regulator may reduce the amount of capex rolled forward based on a prudency test. However, there is no automatic optimisation of the asset base.

There is a capital redundancy provision (rule 85(1) of the NGR) which provides that a full access arrangement may include (and the regulator may require it to include) a mechanism to ensure that such redundant assets are removed from the asset base. However, this is a discretionary provision and there is no automatic provision that excludes these assets from the asset base.

Continued use of fully depreciated assets

Under the NER/NGR, the regulator sets the capex allowance for a service provider for an upcoming regulatory period, based among other things on the proposal provided by the relevant service provider. The rules are reasonably prescriptive about how the allowance is to be set, and only capex which is efficient and prudent is likely to be approved by the regulator. The regulator does not approve individual projects, and while the capex allowance determines the return the service provider may receive, it does not constrain the capex program the service provider may undertake. In setting the allowance the regulator may take into account the extent of assets which have reached the end of their economic life, but no rule prevents the regulator from approving capex in respect of the replacement of assets which have reached the end of their economic life but which continue to be functional.

Under the NER/NGR, the regulator also has the power to approve depreciation schedules. This includes the power to reject proposed depreciation schedules. This should allow the regulator to have some measure of control over the economic lives of assets.

B Summary of issues raised in first round submissions

Issue	Stakeholder	AEMC Response
First part of the rule change requests - optimisation of asset base		
Whether there is a problem (regulated service providers and competitive markets)		
	APIA (p. 2) submits that the need for regulation to replicate a competitive market is not a requirement of the NEO or the NGO. APIA (p. 6) states that "replication of competitive markets is not considered by either the NGO or the Revenue and Pricing Principles. The NGO and RPP are concerned with maximising efficiency."	Regulation does not seek to completely replicate competitive conditions. Regulators try to promote an outcome which is consistent with the workable competitive market, not a perfect competitive market.
	Jemena Limited (p. 3) submits that the MEU proposal overlooks the fact that businesses that operate in competitive markets have strategies and practices available to them that are not available to regulated businesses.	Noted. In certain ways regulated businesses do not have the same choices and options as companies in a competitive market. Among other things, they may have obligations to meet reliability standards. See section 7.5.1 of the draft rule determination for further discussion.
	The ENA (p. 8) and Ergon Energy (p. 4) submit that it should also be acknowledged that firms operating in competitive environments have opportunities that are not available to regulated NSPs. They can: • Revalue assets throughout their lives; • Earn significantly higher returns which exceed the original cost of financing successful investments; • Withdraw capital from the delivery of services where the cost of financing is not met; and • Front-load depreciation to reduce the level of commercial risk from some investments.	Noted. As above.
	The MEU (p. 5) submits that the two proposals reflect the practices of commercial competitive enterprises. It states that if a business is subject to competition, an asset	See discussion above.

Issue	Stakeholder	AEMC Response
	is either closed down and written off if it is not able to add profitability of the business, or operated at a lesser output and the asset value written down to a level where the asset value reflects its value to the business.	
Whether there is a problem (incentive for over-investment)		
	Ausgrid (pp. 2, 8) does not support that there is an incentive to under forecast expected capex under the current regulatory framework, and the existing rules already provide effective incentives to ensure that capex is not in excess of approved allowances. It submits that if it under forecasts and spends in excess of the regulatory allowance, it would lose the time value of capital spent in excess of the regulatory allowance; or it needs to delay capex from other projects, or delay other projects to pay for an under forecast capital project.	Noted. See sections 6.1 and 6.3 of the draft rule determination for further discussion on this matter. The capex incentive mechanism is being considered at general level by the AEMC in the context of the AER rule change requests on network regulation.
	UE and Multinet (p. 3) state that the MEU's claims that the rules provide incentives to over-invest are unfounded, as engineering resources and skills are used to develop condition-based expenditure plans that optimise costs and service performance.	
	ESAA (p. 2) submits that the arguments in the MEU proposal fail to acknowledge the basic form of incentive-based regulation embodied in the National Electricity and Gas Rules. Under this form of regulation, if a service provider spends more than expected to do this it bears a portion of the extra cost and if it can do so more cheaply it retains a portion of the savings.	
	Aurora (p. 11) submits that the MEU provided no evidence that DNSPs build outsized assets to maximise the value of the regulatory asset base and so maximise their revenue. Moreover, it submits that an indication of what an efficient level of asset utilisation might be has not been provided. Aurora therefore suggests not changing the rule because the MEU couldn't show that there is a problem.	Noted. See section 7.5.1 of the draft rule determination for further discussion on this matter.
	The ENA (p. 1) considers that the MEU has not provided clear supporting evidence of the claimed deficiencies in the regulatory regime to justify the proposed amendments. In particular, no substantive evidence of a systematic incentive to overspend has been demonstrated in the material included in the rule proposal, nor	

Issue	Stakeholder	AEMC Response
	has the claimed issue of unjustified replacement of depreciated assets been supported with empirical, or even anecdotal, evidence. ENERGEX (p. 1), Envestra (p. 2) and ESAA (p. 2) take a similar view.	
Whether there is a problem (specific mechanism in the NGR)		
	APIA (p. 2) and Envestra (p. 3) submit that the NGR already have mechanisms addressing many of the issues the MEU has relied on as justification for the rule change proposal (Rule 77, 79, 84 and 85). Moreover, APIA (p. 4) notes that 85(1) has been used in the past under corresponding provisions in the predecessor to the NGR, the Gas Code.	There are mechanisms relevant to the optimisation of asset base in the NGR. They are provided in rule 85 and rule 77. One gives the regulator the power to include a capital redundancy mechanism in an access arrangement; one is the ex post prudency review available to the regulator as part of rule 77 which excludes capex which is not prudent or efficient from the asset base. The MEU has not adequately established why the provisions in the NGR do not act as a deterrent against under-utilisations of assets. See section 7.5.1 of the draft rule determination for further discussion on this matter.
	UE and Multinet (p. 5) notes that the NGR presently provide scope for a mechanism to be included in an access arrangement to remove assets from the asset base that ease to contribute in any way to the delivery of pipeline services. However, UE and Multinet (p. 9) note that rule 85(1) does not mandate the removal of under-utilised assets from the asset base. They do not support the duplication of rule 85(1) from the National Gas Rules in light of current regulatory practice and the inherent difficulties in exposing network service providers to stranded asset risk. Moreover they would support the removal of rule 85(1).	
	The ENA (p. 9) submits that rule 85 of the NGR has generally had limited practical operation under the gas regime, because of the rarity of capital redundancy arising in an interconnected gas network. It is noted that Rule 85 is identical to a provision which has operated under the prior National Gas Code since 2000 without regulatory bodies seeing a need to generally apply such powers in any material cases. Nonetheless an important feature of the rule is the requirement (rule 85(4)) that the regulator must take into account the possible consequences of any stranding decision. The lack of any substantial use of these provisions in the gas regime suggests that their replication in the electricity rules may be otiose.	
	Jemena Limited (pp. 11-12) submits that although access arrangements include redundancy mechanisms, those mechanisms have been invoked only infrequently. Jemena would not support duplication of the NGR provisions in the NER because of	

Issue	Stakeholder	AEMC Response
	the uncertainty that it would create for investors in electricity infrastructure.	
Recovery of efficient cost		
	Aurora (p. 6) notes that an increase in the equity beta value in the WACC formula may be appropriate to address the increased investment risk introduced by the proposed optimisation approach. ESAA (p. 2) takes the same view.	The Commission is of the view that the risk of service providers not recovering costs under the MEU rule change is likely to be low in the long term on the basis that they should be compensated for any added risks through the cost of capital. See section 7.5.2 of the draft rule determination for further discussion on this.
	Ausgrid (p. 5) considers that the MEU's proposed regulatory asset base optimisation would introduce significant risks to investors. For example, if replacement expenditure was retrospectively considered unnecessary by the AER, DNSPs would not be able to recover the costs of these assets through regulated revenues. The likelihood of not being able to recover the costs of an asset would be uncertain, which would further increase risk and thus further increase investor's required rate of return.	
	UE and Multinet (p. 9) submit that the proposed rule change would create significant uncertainty and regulatory risk regarding cost recovery. Furthermore, UE and Multinet (p. 12) note that the proposed rule change focuses on allocative efficiency at the expense of the total cost recovery. They submit that a reduction in total network revenue as a result of the under-utilisation of a particular network asset will adversely affect the achievement of productive and dynamic efficiency.	
Efficient utilisation		
	The ENA (p. 5) submits that the likely effects of the proposed rule on efficient utilisation of an asset are ambiguous due to the indirect relationship between initial capital, operating costs and the degree of asset utilisation. Once installed, user choices about the extent of network usage dominate asset utilisation outcomes and network service providers have little control over utilisation outcomes.	While some user choices will be hard to predict, service providers will be able to expect some of these. This should enable service providers to respond to a certain extent to incentives not to build assets which have a chance of being under-utilised.
	Ausgrid (p. 7) submits that the current rules provide effective incentives for utilisation of assets. Under the current rules, the AER is required to determine whether forecast capex reasonably reflects the efficient costs that a prudent electricity distribution	The Commission agrees with the MEU that the proposal should result in the overall degree of utilisation of assets

Issue	Stakeholder	AEMC Response
	network service provider (DNSP) would incur in maintaining quality, reliability and security of electricity supply. If existing assets are under-utilised the AER can consider this in determining whether future capex should be allowed.	in the system increasing to some extent.
	Grid Australia (p. 2) submits that the proposal from the MEU 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. This locational element would be materially unaffected by whether or not underused assets were optimised. The efficient use of the network would be improved by addressing the pricing rules directly, rather than through the costly measure approved.	
	SA DMITRE (p. 1) submits that it is important to distinguish between assets which are required to be available for service as the need arises and assets genuinely surplus to requirement. One example in its submission is that South Australian electricity networks are constructed to service a peak demand which is about double the average demand, and thus a proportion of network assets are used below their capacity most of the time. Another example is that the Adelaide Central Area electricity transmission supply is provided with built in back-up capacity to meet supply security standards.	
	The MEU (p. 8) considers that the AER rule change proposal does not deal with the efficient utilisation of assets. It submits that the rule changes need to reflect changes in market structures and circumstances. It provides some examples of assets that are likely to become redundant or under-utilised under these circumstances, such as displacement of high carbon emitting generators, introduction of new gas-fired generators, emergence of new renewable energy sources, reduction in demand from major industrial loads, and relocation of major industrial activities off shore or within Australia.	As set out in the AEMC's directions paper on the AER rule change requests, the Commission considers that the capex incentive mechanism in the NER could benefit from enhancement. This includes how the regulatory asset base is set and changes over time. However, as discussed in section 7.5.1 of this draft rule determination, the Commission does not consider that the MEU has adequately established that the problems raised in its rule change requests warrant the solutions it has proposed.

Issue	Stakeholder	AEMC Response
Investment incentives		
	Ausgrid in its letter states that the MEU proposal is inconsistent with the ex ante nature of the current regulatory framework. It also considers that the proposed changes will significantly increase investment risk and raise the cost of capital. Ausgrid (p. 5) notes that the MEU 's proposed asset base optimisation would provide significant disincentive to invest in capital and this would threaten the reliability and security of electricity supply, as well as the safety and reliability of electricity networks.	On one hand optimisation would put pressure on service providers to reduce inefficient investment, on the other hand optimisation could undermine, rather than promote efficient investment. This is due to the risk that certain assets will not be installed or that smaller sized investment is likely to be more attractive for service providers. See section 7.5.2 of the draft rule determination for further discussion on this matter.
	APIA (pp. 1-2) submits its concern about the uncertainties and the incentives created by the proposed changes. It also submits that the implementation of this rule change would create further incentive for inefficient 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 (p. 8) considers the proposed rule change would lead to less efficient investment in energy infrastructure: • expect investment in smaller increments of capacity to avoid the potential for reductions in the review. The result will be a substantially greater capex requirement in the long run, thereby increasing the cost of gas transportation; • expect the increase in the systematic risk of the businesses thereby increasing the value of Beta used in calculating the cost of equity under the CAPM; and • the focus is on minimising the risk of stranding as a result of re optimising of their capital bases at regulatory reviews.	
	ENERGEX (pp. 1-2) submits that the rule change request would create disincentives and uncertainty to network investments. Also that it represents a change in the fundamental nature of the forward-looking incentive-based approach adopted by Australian policy-makers and regulatory bodies.	

Issue	Stakeholder	AEMC Response
	The ENA (p. 1) submits that the proposal surrounding the re-optimisation of network business's regulatory asset bases would create new disincentives to investment and additional regulatory risks requiring offsetting compensation for the risk that past investments will be stranded. The ENA (pp. 5, 9) also submits that the proposal explicitly contemplates investment which was made on a prudent ex ante basis, not being able to be recovered by the network. In addition, it notes that the prospect of investment being stranded at a future regulatory reset is likely to deter the making of efficient investment which has a material risk of assets being optimised prior to a full regulated return being achieved; if implemented, the proposal would strongly undermine incentives to invest in a timely manner with a view to capturing economies of scale, due to the risk of future asset stranding; the proposal would promote short-term incremental network development to meet short-term demand.	
	The ENA (pp. 4-5) submits that the re-opening of established regulatory asset base values from the MEU faces a number of serious disadvantages: • creates an incentive to sub-optimally undersize network assets to meet short-term demand within a regulatory period rather than minimise economic costs to serve over the life of the relevant assets; • could create distorted incentives for networks to reduce refurbishment capex, or undertake operating expenditure in preference to refurbishment capex where such costs are not recognised in replacement cost valuation approaches; and • does not provide stronger incentives as decisions to invest are irreversible, as only future decisions, still made in an environment of uncertainty as to whether demand will meet forecast, can be influenced.	
	Envestra (p. 3) submits that the rule change request is likely to reduce investment as there will be an increased risk that the AER will disallow capex incurred in the previous regulatory period, thereby stranding assets. It states that most private sector companies, through capital rationing and asset management plans, aim to defer investment as long as possible, and are more likely to underspend approved capital allowances.	

Issue	Stakeholder	AEMC Response
	Envestra (p. 5) submits that a preferred approach would be to develop a regime that provides natural gas distributors with incentives to optimise capex.	
	Ergon Energy (p. 5) submits that it believes the proposed rule change would have negative impact on investment through uncertainty and inefficiency. This would lead to an increase in the cost of capital as a higher return would be demanded to offset increasing risk. Inefficient investment would be promoted as DNSPs would be encouraged to build only for current demand, rather than building for the future (i.e. allowing excess capacity for growth). Ergon Energy (p. 8) believes a more appropriate avenue to introduce a capex incentive mechanism could be through the Efficiency Benefit Sharing Scheme (EBSS). It notes that Clause 6.5.8(b) of the rules currently provides the AER with the power to introduce a capex incentive scheme via the EBSS.	
	Grid Australia (pp. 6, 16, 17) does not consider that the proposed solution to introduce an assessment to optimise assets will promote the efficient investment in the electricity transmission network. It considers that the proposal to optimise assets will discourage efficient investment by providing downside risk to investors that such an investment may be removed from the asset base (even if it was efficient at the time of making the investment decision), particularly for interconnection and like projects. It notes that it is likely that the MEU's proposal would deter investment in assets for which demand is hard to predict.	
	Jemena Limited (p. 10) submits that the overall effect will be negative. MEU's proposals, if adopted, will introduce a significant new asymmetric incentive which will increase service providers' cost of capital.	
	Aurora Energy (p. 6) considers that the introduction of the ex post optimisation of regulatory asset base would have a negative impact on investment. It submits that the incentive to invest is unlikely to be attractive if a return is provided upon only a portion of the investment, with that portion being proportional to the utilised fraction of the infrastructure. Furthermore, Aurora considers that the uncertainty due to potential, unquantifiable reduction in return does not provide a positive incentive for	

Issue	Stakeholder	AEMC Response
	investment.	
	The AER (p. 3) notes that in a review in 2004 the ACCC noted at the time that locking in the RAB provides the regulator with greater control over tailoring incentives and also provides more certainty than a revaluation approach.	
	The AER (p. 3) submits that under the existing framework the risk of under utilisation of network assets resides with consumers rather than NSPs. The MEU rule change proposal would result in a reallocation of risk that may require further regulatory changes in the future.	
	The AER (p. 4) is of the view that the "40/60 sharing factor" sharing mechanism would strengthen incentives to invest efficiently. The AER also suggests focusing on improving asset utilisation through mechanisms that improve the effectiveness of the planning processes and on pricing mechanisms that encourage efficient locational decisions.	
	ESAA (p. 3) suggests that since the regulatory asset base is a key driver of future cashflows, it is essential that investors have confidence that once agreed by the regulator, any additions to the regulatory asset base are carried forward and can earn a return over their economic life. The risk caused by the uncertainty of the return will increase the investor's required cost of capital and will in turn lead to higher costs for consumers.	
	The MEU (p. 4) submits that there will be an incentivisation of efficient investment and a disincentivisation of over-investment, gold-plating and inflated costings. This is because existing investments will be efficiently costed but it will result in encouraging downstream investments, which in turn will encourage demand for energy and hence a need for new efficient investments.	
Regulatory process		
	The ENA (pp. 5-6) submits that the nature of the regulatory process and the role of the regulator would be fundamentally altered by a requirement to apply the	The AEMC agrees that ex post optimisation would be difficult to implement and it would increase the

Issue	Stakeholder	AEMC Response
	additional clauses proposed by the MEU. The AER has indicated in its recent rule change request that it currently lacks the resources and capacity to fully analyse and assess detailed information put forward by businesses in their regulatory proposals under the existing rules.	complexity and costs of the regulatory process. See section 7.5.2 of the draft rule determination for further discussion on this matter.
	Ergon Energy (p. 8) submits that if the proposed rule change is adopted, it should not commence until the regulatory control period subsequent to the next regulatory control period (i.e. 2020–25 for Queensland DNSPs).	
	Grid Australia (p. 19) submits that the MEU proposal would introduce considerable complexity in the regulatory process given it would require the AER to apply an impracticable criterion.	
	Jemena Limited (p. 11) submits that the increase in administrative burden is likely to be considerable if, as implied, there would be rigorous ex post and ex ante reviews of capex, and if regulatory asset base were to be re-optimised at every review.	
	Jemena Limited (p. 14) submits that if MEU's proposals are translated into rules, then the AER would have to develop and publish guidelines detailing how it will: • administer the requirement to optimise businesses' RABs; • determine whether a particular asset replacement is or is not premature. There would then need to be a period of time allowed before any business is required to submit an access arrangement proposal under the new arrangements. It supports the AEMC's considerations about the possible impact on scheduled revenue determination processes, and the timing of rule changes arising from the AER/EURCC proposals, as relevant considerations.	
	MEU (p. 10) suggests that the MEU proposal should commence with the first access arrangement review under the next round of regulatory reset.	
	ESAA (p. 3) considers significant costs will be added to the regulatory process. It considers that the regulator will need to undertake a whole new set of significant and	

Issue	Stakeholder	AEMC Response
	complex analysis on the RAB. Moreover, service providers need to invest greater resources in the regulatory process in order to satisfy the terms of the rule change, and other stakeholders would also be affected if they wished to engage in the process.	
	The ENA (p. 9) submits that each of the proposed rule changes would represent a significantly increased regulatory burden. Asset base revaluation exercises are costly, resource-intensive, and lengthy processes. The carrying out of such exercises on a five yearly basis would substantially add to the overall costs of typical regulatory reviews, a cost which has been estimated by the Brattle Group to exceed $325 million per five year regulatory period.	
	The MEU (p. 7) does not consider that the proposed rule could place significant administrative burden on the AER and businesses as data is available at regulatory resets. It submits that the regulatory regime allows a regulated business to remove assets that are not fully depreciated but need replacing because of system needs.	
	Aurora (pp. 8, 10) and UE and Multinet consider that the costs and benefits of the proposed rule are not symmetrically realised. It considers that any administrative burden that falls upon the AER and the service providers will eventually be passed onto the customers through network tariffs and the taxation base. It considers the administrative burden would be significant. This is because the current assessment criteria relate to the total of the forecast capex, not the individual projects that make up the forecast capex. However the MEU rule change request would require the AER to undertake a complete assessment of all capital infrastructure projects. Also, past experience of review implies that a significant amount of resources and time will be required of the AER and service providers.	
	The AER (p. 2) accepts that there is a need to strengthen incentives on network service providers to only incur efficient capex. However, there are issues that would need to be considered: • an ex post review may be an intrusive and resource intensive process; and • issues in measuring and assessing asset utilisation in energy networks as part of	

Issue	Stakeholder	AEMC Response
	the optimisation process.	
	Envestra (p. 3) submits that detailed assessment of the condition of assets will increase the costs of regulation, requiring the regulator to get more involved in capex decision making, an area where they have argued previously that they are not well qualified to opine.	
	Envestra (p. 4) submits that the AER would require significant additional effort as the AER needs to assess both forecast capex and capex from previous regulatory periods. It points out that it is most likely that natural gas distribution businesses would be required to keep more detailed information on capex to provide the information required by the regulator.	
	ESAA (p. 2) considers that the proposals add to the regulatory burden not just for the networks, but for other stakeholders including the regulator itself.	
	Jemena Limited (p. 11) submits that the AER would be required to micro-manage the business. The AER is not equipped for that role. Moreover, such a role is inimical to the principles of incentive regulation where it is accepted that businesses themselves are in the best position to plan and manage their assets and operations.	
	The MEU (p. 6) submits that the AER is the appropriate body to determine and assess the age and condition of a regulated network business' asset. The AER is doing this job as it is required to assess the age and condition of the regulated assets as part of the AER's assessments under the regulatory regime. A similar approach should be carried out to do a review of the existing assets. The activity required by this rule change adds little to the AER work scope. In addition, there is no more information requirement to enable the AER to undertake the review.	
	Ergon Energy (pp. 5-6) does not believe it is appropriate for the AER to determine and assess the age and condition of our assets. It submits that this topic was rejected by the AEMC during the 2006 Rule determination process on the Economic Regulation of Transmission Services. Further, it considers that the AER does not have the expertise, resources or the required depth of knowledge to independently	

Issue	Stakeholder	AEMC Response
	determine and assess the age and condition of a particular asset.	
Other		
	The AER (p. 4-5) notes that other proposals may address the issues raised by the MEU: the proposed rule changes to strengthen incentives for efficient capex; the Transmission Frameworks Review; and Regulatory Investment Test-Transmission. It is of the view that its rule change proposal submitted in September 2011 represents a balanced package of measures capable of appropriately addressing the key issues raised by stakeholders, including the MEU.	Noted.
	ESAA (p. 2) suggests that the AER rule change process is the appropriate way to consider these issues raised by the MEU.	
	The ENA (p. 5) submits that Australian and international regulatory practices do not support movement to a revaluation approach.	Noted.
Second part of the rule change requests - use of fully depreciated assets		
Whether there is a problem		
	MEU (p. 5) submits that a competitive business will continue to use assets which have been fully depreciated but which are still contributing to the profitability of the business.	Noted.
	APIA (p. 6) submits that the MEU proposed changes are asymmetric. The MEU's depiction is incorrect. It states that "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." Therefore, it should be allowed to earn a return from the used and useful assets if they are to be used. Aurora (p. 2) takes the same view.	Noted.
	Aurora (p. 2) agrees with the MEU that the current NER pricing regime incentivises replacement of fully depreciated regulated assets because the regulated revenue	While there may be the potential of a revenue stream for the replacement, this may not justify the expenditure that

Issue	Stakeholder	AEMC Response
	stream from an asset is a function of the asset value, therefore this can potentially lead to the replacement of a serviceable asset solely to retain a revenue stream.	would be required to build it.
	Ausgrid (p. 2) considers that the problems identified by the MEU do not exist. It states that its asset replacement decisions are not based on whether the economic life of assets has expired, but on the condition of the assets from an engineering perspective, and their ability to perform their intended functions safely and reliably.	The AEMC agrees that no evidence has been provided on the extent to which service providers replace assets automatically so that they can get a regulated return on those assets. The AEMC is exploring capex incentives generally in the context of the AER rule changes on network regulation. A detailed discussion is contained in section 8.5.1 of the draft rule determination.
	SA DMITRE (p. 2) submits that there is a protection mechanism to ensure Network Service Providers do not inefficiently depreciate assets in the form of AER approval of the economic life of assets. Ausgrid (p. 2) also states that the AER has the ability to substitute its own replacement expenditure forecasts when determining regulated revenues.	While not acting as a check on the regulator approving replacement of functional assets, the regulator does have the power to reject the depreciation schedules provided by a service provider. For example, according to 6.12.1(8), if the AER decides against approving the depreciation schedules submitted by the DNSP, it can provide a decision determining depreciation schedules in accordance with 6.5.5(b).
	ESAA (p. 2) submits that a service provider makes more money if it can retain an asset in service for longer than expected regardless of whether there is any asset base that can be related to that asset, because it can defer the replacement cost. It also makes more money if it considers that it can build a smaller rather than a larger asset to meet its requirement. The ENA (p. 7) also takes the view that network businesses are rewarded for the deferral of replacement capital.	Noted. See sections 6.3 and 7.5.1 of the draft rule determination for further discussion on this issue.
		Noted.
	Ergon Energy (pp. 3-4) and the ENA (p. 7) disagree with the MEU's contention that viable assets are replaced once their depreciated value reaches zero and notes that the MEU does not offer any substantiated evidence that businesses face inappropriate incentives to do so.	Noted. See section 8.5.1 of the draft rule determination for further discussion on this matter.

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	Jemena Limited (p. 13) submits that MEU has not produced any evidence that the premature replacement is a problem. It is possible to envisage debates about whether a "premature" replacement was for the purpose of generation profit or was justified/required on some other ground. In addition, the AER would be required to examine the business at the micro level - something it is not equipped to do.	Agree. See section 8.5.1 of the draft rule determination for further discussion on this matter.
Recovery of efficient cost		
	The ENA (p. 8) submits that the proposed rule changes potentially breach the principle of the recovery of efficient costs by constraining a network firms' capacity to recover a return on capital actually employed to deliver safe and reliable services.	If ex ante approval is not given the service provider may then decide not to build the asset it had proposed. See section 8.5.2 of draft determination for further discussion on this matter.
Efficient utilisation		
	The ENA (p. 8) submits that the proposed rule changes create substantial additional complexity in tracking and adjusting the regulatory asset base of regulated networks, potentially excluding it from providing a consistent ongoing reflection of the actual value of the assets invested to deliver the services.	The proposals are likely to result in service providers retaining more assets in service for longer since service providers may not have been allowed capex for their replacement. However, it is unclear whether this increased utilisation will in all circumstances be efficient, particularly if the service provider is pushing assets beyond the point it otherwise would.
	Grid Australia (p. 19) submits that 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.	
Investment incentives		
	Aurora (p. 6) considers that the proposed rule change would have a minimal effect on investment. Since investment is only required to fund the construction of new infrastructure, the deferral of the need for new construction should have no impact.	The MEU's proposal in respect of used and useful assets would not have a significant effect on the overall investment incentives for service providers. The capex allowance for the replacement is to be determined before the regulatory period. See section 8.5.2 of the draft rule determination for
	The ENA (p. 8) submits that the proposed rule changes significantly affect incentives to invest as they would fail to provide a return on capital employed to deliver	

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	regulated services. As a result, there would likely be a lowering of overall investment levels, and the muting or 'chilling' of incentives to undertake efficient expansion and upgrading work on network infrastructure due to concern that a proportion of this investment would be non-recoverable.	further discussion on this matter.
	Grid Australia (pp. 3, 19) submits that 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 capex. 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.	Noted.
	The AER (p. 3) agrees with the need to ensure that effective use is made of all assets, including depreciated assets. However it notes that it is not clear that the proposed changes to the rules will alter the incentive on service providers to replace fully depreciated assets during the regulatory period; and asset-by-asset assessment of capex proposals would create significant assessment costs.	Noted.
	The MEU (p. 9) submits that with respect to the proposal related to the replacement of a fully or partially depreciated asset from being included in the regulatory asset base, it believes that its solution provides an approach which is consistent with incentive regulation.	Noted.
Regulatory process		
	Ausgrid (pp. 3, 7, 8) does not support the amendment to the asset management as it is particularly concerning that the MEU has suggested the AER perform the role of asset manager and approve any asset replacements. The proposed changes would shift focus away from sound engineering based management of energy networks.	The proposed rules would increase the complexity and the costs in the regulatory process. The detailed discussion is contained in chapter 8.5.2 of the draft rule determination.
	The ENA (p. 8) submits that the proposed rule changes result in the AER being required to make judgements which go beyond the scope of an economic regulator, inevitably leading to it being drawn into making contentious engineering-style	

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	assessments over the definition of a 'used and useful' network asset. This need would likely require a more exhaustive, intense regulatory process with a higher level of regulatory uncertainty as to whether the outcome would meet the revenue and pricing principles contained in the National Electricity Law and National Gas Law.	
	The ENA (p. 10) submits that there is insufficient detail as to how the rule proponent envisages the AER acting to ensure this regulatory requirement is met. It is difficult to conceive of the AER being able to meet this rule requirement whilst fostering a stable, certain and incentive-based regulatory framework which underpins efficient ongoing investment.	
Other		
	The ENA (p. 7) also points out that the definition of "replacement" capex cannot often be readily or clearly separated from other types of capex (such as augmentation expenditure) which may have multiple underlying drivers. For example, replacement of a transformer with a higher rated transformer can often address both the need to replace an aging asset and the need to increase network capacity.	Noted.
	SA DMITRE (pp. 1-2) submits that the AEMC needs to consider the consequences of the uncertainty caused by the ex-post review from the AER to determine if a depreciated asset is still useable. It is concerned that there is an increasing risk of supply failure if the Network Service Provider is not replacing the end-of-life assets as a result of this uncertainty. When inevitable failure occurs, the costs to consumers and the economy may quickly exceed the asset replacement cost. It also submits that the AEMC needs to consider how in-service assets which form part of the shared network but are not included in the RAB should be taken into account. It points out the MEU proposal does not appear to consider what the consequences will be if not including replacement assets in the RAB on the Service Target Performance Incentive Scheme.	Noted.

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	APIA (p. 9) submits that information about asset age and depreciation are provided. In addition, information supporting ex ante and ex post 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. It notes that generally, any assessment of age and condition is supported by expert engineering consultants. It is undesirable ground for the AER to have to undertake decisions.	Noted.
	Ausgrid (p. 2) also states that an audited network management plan is required to be submitted to the NSW Director-General of NSW industry and Investment under the Electricity Supply (Safety & Network Management) Regulation 2008.	Noted.
	Grid Australia (p. 18) 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. In addition, there are a number of factors for the consideration of replacement. Used and useful test should not be the only factor to determine business' decision.	Noted.
	Ergon Energy (p. 4) suggests that inappropriate investments, such as over-sized assets and replacement of viable assets for revenue improvement reasons, could be effectively handled by auditing NSPs' policies rather than through post investment optimisation.	Noted.
	In Austrid (pp. 3, 7, 8) view, the asset remaining lives in the AER's post-tax revenue model is not an indicator of replacement need or cost and should not be used as one. Ausgrid's replacement plan looks at the age and condition of assets from an engineering perspective as well as the cost trade-off between maintaining existing assets and replacing old assets.	Noted.

C Summary of issues raised in second round submissions

Issue	Stakeholder comment	AEMC Response
General comments		
The assessment process	The MEU (p. 6) considers that its concerns should be addressed under the review of the AER rule change process and seems it has a "better rule" under consideration but does not provide this as part of the assessment of the MEU proposals.	The AEMC is considering the broader concerns in the AER rule change process. See sections 6.3.1, 7.3.2 and 8.3.2 of this final determination for further discussion on this matter.
Regulated monopoly and competition	The MEU (p. 7) considers that the AEMC's view about that the regulated service provider has higher requirements (such as reliability) that would impact on its investment needs is an incorrect assumption.	The AEMC disagrees with the MEU. As discussed in the draft rule determination, in certain ways regulated businesses do not have the same choices and options as companies in a competitive market. In particular, they have obligations to provide a service that does not exist for most competitive businesses.
Risk vs reward	The MEU (p. 9) agrees with the philosophy that if the risk was increased there would have to be a compensating adjustment in the WACC. It points out that this type of adjustment was not undertaken in the AEMC's past actions or in the development of the risk factor (equity beta) used by the AER.	The reasons why a higher WACC is required to compensate a higher risk are discussed in the draft rule determination and Covec report: the Initial Views on Rule Changes Proposed by MEU.
Incentives to over-invest	The MEU (p. 10) describes the way in which a service provider can make profit from capex investment meaning there is an incentive for over investment: • the profit comes from the WACC*RAB	In respect of electricity the AEMC has discussed the over investment incentive in the draft rule determination on this rule change and the directions paper on the AER network regulation rule change. The AEMC agrees with the second point the MEU

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	calculation element of the building block approach; • the WACC allowed by the regulator is higher than the firm's cost of capital, there is an incentive to over invest; • by deferring investment to later in a regulatory period. The MEU comments that the over investment in the final year would incur almost no time related cost penalty, but receive an additional revenue stream for many years into the future.	made, which is that a higher regulated WACC would provide incentive for more investment. The AEMC does not agree there is an incentive to over-invest under the NER or NGR.
Provision of evidence	The MEU (p. 12) states that it is impossible to provide specific evidence to support the contentions behind the proposed rule changes because any specific evidence would be held within NSPs' knowledge bases.	While the difficulties faced by the MEU are understandable, the AEMC's general approach is to require the rule proponent to substantiate the problem it identifies. It important for regulatory certainty that the rules are not changed in the absence of a problem.
Prudency and pricing principles	The MEU (p. 15) submits that according to pricing principle 2, there must be incentives to ensure future investment is efficient, and these are absent from the rules.	The economic regulation that is applied to electricity distribution and transmission network services takes an incentive-based approach to achieving efficient investment. The NGR provide for scrutiny of capex both before and after it is undertaken. See sections 3.5 and 4.5 of this final determination for further discussion on this matter.
	Aurora (p.1) considers that the AEMC has provided a balanced assessment of the rule change proposal and subsequent stakeholder submissions.	Noted.

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	Jemena (p. 1) and Grid Australia (p.1) support the AEMC's position in the draft rule determination.	Noted.
	APIA (p. 2) supports that the MEU proposals would have a negative impact on incentives for future investment in infrastructure. It considers that proposals would place future investment in infrastructure at risk, introduce unnecessary cost and magnify the regulatory task for both service providers and regulators.	Noted.
	APIA (p. 2) submits that the MEU has not adequately established that the specific problems raised in its rule change requests exist and there remains an absence of evidence of the existence of the MEU concerns. The MEU (p. 12) claims the difficulties for gathering relevant information to support its contentions behind the proposed rule changes, as the information would be held by NSPs.	Noted. See section 6.3.1 of this final determination for further discussion on this matter.
	APIA (p. 2) submits that the proposed mechanisms of re-optimisation of pipelines are highly problematic and introduce an unwarranted level of intrusion into service provider's businesses. The proposals would add to the workload of the regulator and service providers by multiples of those currently required.	Noted.
Optimisation		
	The MEU (p. 19) states that some of the electricity transmission assets providing connection to the Hazelwood power station in Victoria will become	Noted.

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	redundant if the power station is closed. These assets are included in the assets of the shared network and therefore consumers will be required to continue to pay a return on these assets until they are fully depreciated. At the same time, if there is a new power station to be constructed to replace the output of Hazelwood, the new power station will contribute to the connection assets but if there is any congestion caused by the new power station, consumers will be expected to pay for the relief of this congestion in the shared network.	
	The MEU (p. 20) states that optimisation imposes a discipline on a NSP not to oversize. It states that a time frame needs to established and standard sizes of equipment needs to be defined.	The AEMC agrees there is certain benefit from the optimisation.
	The MEU (p.21) suggests that undersized assets could be avoided by the provision of guidelines which allow for acceptable oversizing in the interests of future consumers. It suggests that guidelines which allow a degree of oversizing without the risk of later optimisation then the risk of undersizing is greatly reduced.	The AEMC accepts this may be possible, but the benefits of optimisation are outweighed by the disadvantages.
	The MEU (p. 21) agrees that carrying out optimisation does impose increased regulatory costs. However, it states that the complexity and cost was readily absorbed in regulatory decisions under the NEC. It submits that the more recent reviews display considerably more complexity and cost than in the past when optimisation was required.	The AEMC noted the increased regulatory costs and risk in its draft rule determination. See section 7.5.2 of the draft rule determination for further discussion on this matter.

Issue	Stakeholder comment	AEMC Response
	The MEU (pp. 3, 25) states that the AEMC considers that it is better for consumers to incur a higher cost for infrastructure by allowing uncontrolled investment on the basis that reliability of supply must take primacy.	Reliability is an important factor that needs to be taking into account for the regulation of a natural monopoly. However, this is not to say that reliability of supply must take primacy over anything else. Moreover, the AEMC disagrees with the MEU about "uncontrolled investment". The incentive scheme generally, and the changes proposed in the AER rule change on network regulation, create incentives against uncontrolled investment; as discussed in the draft rule determination, most service providers do not have access to an excessive supply of capital and are likely to have to raise debt to fund new investment.
	APIA (p. 2) does not consider the MEU's rule change proposal could provide benefits in terms of overall utilisation of networks, given the NGR has mechanisms to address the problems raised by the MEU.	Noted.
Use of fully depreciated assets		
	The MEU (p.28) states that it has no evidence that NSPs have actually replaced assets that are still used and useful because such information would be held within the data bases of the NSPs.	While the difficulties faced by the MEU are understandable, the AEMC's general approach is to require the rule proponent to substantiate the problem it identifies. It is important for regulatory certainty that the rules are not changed in the absence of a problem.
	The MEU (p. 28) is of the view that service providers are rewarded for the deferral of replacement capital in the short term. The longer term benefit to the NSP	There is no cost and benefit analysis provided about why the longer benefit to a NSP is much greater from replacing the asset. In particular, the MEU is making a potential assumption that the

Issue	Stakeholder comment	AEMC Response
	is much greater from replacing the asset.	regulated WACC is higher than the actual WACC, which is not always true in reality.
	The MEU (p.29) is of the view that the draft decision does not attempt to provide any assessment of net benefit or detriment to consumers.	The AEMC has assessed the MEU proposals against four assessment criteria. The conclusion is that the benefits are outweighed by the potential risks and the costs of the regulatory process. For more discussion see section 8.5.2 of the draft rule determination.
	The MEU (p.29) states that the assets most likely live longer than the period over which it is depreciated. It also states that it is unlikely the expected asset life will be underestimated.	It is not clear why it is likely the functional life of an asset is longer than its economic life.
	The MEU (p. 32) states that the draft rule determination is supportive of the view that having no return on an asset is better than having a return and seeking more capital.	Noted.
	The MEU (p. 34) states that the observation from the draft rule determination about the AER's ability to change depreciation schedules is not correct for the following reasons: • firstly the depreciation schedules are proposed by the NSP and the regulator only approves (or not) what has been proposed; • it is difficult for the regulator to enforce a depreciation schedule that the NSP did not accept; and • if there is no ex post review, the regulator would not be able to identify whether the fully	The draft rule determination has provided discussion in relation to the AER's ability to change depreciation schedules. For more detail please refer to section 8.5.1 in the draft rule determination and section 8.3.1 in this final determination.

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	depreciated assets were being replaced when they are used and useful.	
	The MEU (p. 34) states that the draft rule determination does not do an examination of the potential benefits to consumers. It states that using the model developed itself, the proposal would reduce some 8% of the costs to the consumers.	It is not clear how the MEU derived the 8% costs reduction to the consumers.
	The MEU (p. 35) states that the observation that the used and useful proposal might incentivise the NSP to perhaps use shorter life assets because of less flexibility is pure supposition and not supported by any evidence.	Noted.
	The MEU (p. 35) submits a modelling evidence supporting the intuitive conclusion that retaining used and useful assets that are fully depreciated will provide consumers with a significant benefit.	The AEMC accepts that there is certain degree benefits from retaining used and useful assets that are fully depreciated.