# Better Regulation

# Explanatory statement

# Draft Capital Expenditure Incentive Guidelines

August 2013

AUSTRALIAN ENERGY REGULATOR

# Shortened forms

| Shortened term | Full title |
|---|---|
| AER | Australian Energy Regulator |
| AEMC | Australian Energy Market Commission |
| augex | Augmentation expenditure |
| capex | Capital expenditure |
| CEM | Carbon + Energy Markets |
| CESS | Capital Expenditure Sharing Scheme |
| COSBOA | Council of Small Business Australia |
| CRG | Consumer Reference Group |
| DNSP | Distribution Network Service Provider |
| DSDBI | Victorian Government Department of State Development and Business Innovation |
| EBSS | Efficiency Benefit Sharing Scheme |
| ENA | Energy Networks Australia |
| EUAA | Energy Users Association of Australia |
| guidelines | Capital Expenditure Incentive Guidelines |
| MEU | Major Energy Users Inc. |
| National Electricity Rules (NER) | The rules as defined in the National Electricity Law. |
| NSP | Network Service Provider |
| opex | Operating expenditure |
| repex | Replacement expenditure |
| PIAC | Public Interest Advocacy Centre Ltd. |
| RIT-D | Regulatory Investment Test - Distribution |
| RIT-T | Regulatory Investment Test - Transmission |
| STPIS | Service Target Performance Incentive Scheme |
| TEC | Total Environment Centre |
| TNSP | Transmission Network Service Provider |
| WACC | Weighted Average Cost of Capital |

# Request for submissions

This explanatory statement is part of the Australian Energy Regulator's (AER) Better Regulation program of work, which follows from changes to the National Electricity and Gas Rules announced in November 2012 by the Australian Energy Market Commission (AEMC). The AER's approach to regulation under the new framework will be set out in a series of guidelines to be published by the end of November 2013.[1]

Interested parties are invited to make written submissions to the AER regarding this explanatory statement and the associated Capital Expenditure Incentive Guidelines by close of business, Friday, 20 September 2013.

Submissions should be sent electronically to: incentives@aer.gov.au. The AER prefers that all submissions sent in an electronic format are in Microsoft Word or other text readable document form.

Alternatively, submissions can be sent to:

Sebastian Roberts
General Manager
Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

The AER prefers that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information are requested to:

- clearly identify the information that is the subject of the confidentiality claim
- provide a non-confidential version of the submission in a form suitable for publication.

All non-confidential submissions will be placed on the AER's website at www.aer.gov.au. For further information regarding the AER's use and disclosure of information provided to it, see the ACCC/AER Information Policy, October 2008 available on the AER website.

Enquires about this paper, or about lodging submissions, should be directed to the Network Operations and Development Branch of the AER on (03) 9290 1444.

[1] Further details on the consultation processes and other guidelines are available at http://www.aer.gov.au/node/18824.

# Contents

# Executive Summary

This explanatory statement accompanies the draft Capital Expenditure Incentive Guidelines, which aim to outline the Australian Energy Regulator's (AER) approach to incentivising electricity network service providers (NSPs) to pursue efficient capital expenditure (capex).

The AER is Australia's independent national energy market regulator. Our role is to promote the national electricity and gas objectives. Enshrined in the Electricity and Gas Laws, these objectives focus us on promoting the long term interests of consumers.

A major part of our work is regulating the energy networks that transport energy to consumers (electricity poles and wires, and gas pipelines). In 2012, the Australian Energy Market Commission (AEMC) announced important changes to the electricity and gas rules, affecting our role in regulation. Our role is also changed by the energy market reforms that the Prime Minister announced on 7 December 2012.

We initiated the Better Regulation program to draw together these important reforms and our work in developing our regulatory processes and systems. The Better Regulation program involves us:

**National electricity and gas objectives**

The objective of the Electricity and Gas Laws is to promote efficient investment in, and efficient operation and use of, energy services for the long term interests of consumers of energy with respect to—

(a) price, quality, safety, reliability and security of supply of energy; and

(b) the reliability, safety and security of the national energy systems.

- extensively consulting on seven new guidelines that outline our approach to receiving and assessing network businesses' expenditure proposals and determining electricity network revenues and prices
- establishing a consumer reference group specially for our guidelines development work, to help consumers engage across the broad spectrum of issues that we are considering
- forming an ongoing Consumer Challenge Panel (appointed 1 July 2013) to ensure our network regulatory determinations properly incorporate consumers' interests
- improving our internal technical expertise and systems, and our engagement and communication with all our stakeholders.

This document concerns the development of one of the seven new guidelines—the Capital Expenditure Incentive Guidelines (guidelines).

These guidelines are concerned with introducing enhanced incentives for NSPs to pursue efficient capex during the regulatory control period. In particular, the AEMC amended the NER to include a number of new 'tools' that the AER can apply to incentivise NSPs to spend capex efficiently, having regard to an overall capital expenditure objective. Ultimately, the aim is that consumers pay only for efficient capex undertaken by NSPs.

These new 'tools' include ex ante and ex post measures:

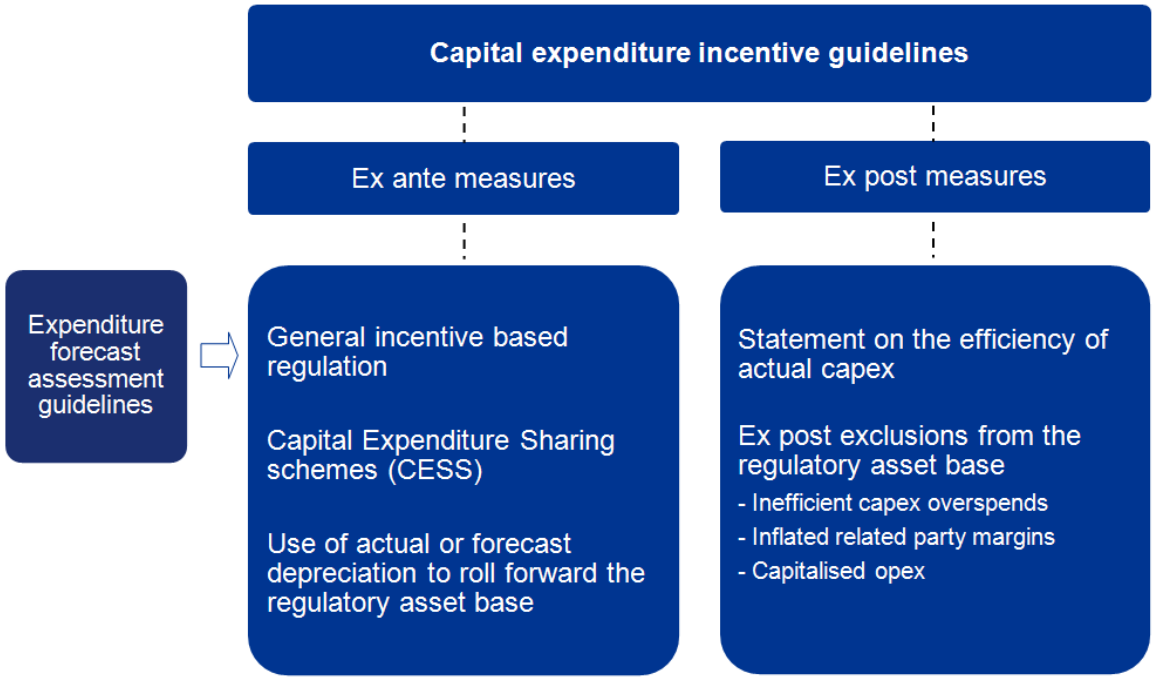
- Ex ante measures provide up front incentives for NSPs to pursue efficient capex and include:

- A new Capital Expenditure Sharing Scheme (CESS) to incentivise NSPs to undertake efficient capex by rewarding efficiency gains and penalising efficiency losses.
- A decision on whether to use depreciation based on actual or forecast capex to update a NSP's Regulatory Asset Base (RAB) at the end of a regulatory control period.

- Ex post measures ensure that consumers pay only for efficient capex incurred by NSPs. As part of the new ex post measures:
  - We will make a statement on the efficiency and prudency of any capex being rolled into the RAB.
  - We may exclude from the RAB:
    - inefficient capex overspends
    - capitalised operating expenditure (opex)
    - inflated related party margins.

Figure 1 shows how these measures fit together.

**Figure 1 How the new ex ante and ex post measures fit together**




Incentives for efficient opex are being considered in a separate process. We already have an Efficiency Benefit Sharing Scheme (EBSS) in place for opex. Proposed changes to the EBSS are being considered through a parallel process involving a draft EBSS and associated explanatory statement.

## Capital expenditure sharing scheme

The aim of the CESS is to incentivise NSPs to pursue capex efficiency improvements during the regulatory control period. After considering submissions to the issues paper, our proposal is for a symmetric CESS that provides a 30 per cent reward for underspending and a 30 per cent penalty for

overspending. The CESS would be continuous. That is, it would provide the same reward/penalty in each year of the regulatory period. We are proposing that the same form of CESS will apply to all NSPs. We believe that this form of CESS, alongside our ex post review process, will best achieve the requirements of the NER without overly penalising or rewarding NSPs for forecasting errors or unforseen events.

This approach is a departure from our position in the issues paper (which was for an asymmetric CESS with greater penalties than rewards). We are now proposing a symmetric CESS. In recommending a symmetric CESS we have considered the interactions between the CESS, the ex post review and our approach to capex forecasting. In particular, a symmetric CESS alongside these other measures should ensure that NSPs have sufficient incentives to undertake efficient capex. In particular:

- We think that an asymmetric CESS is not necessary to contain inefficient capex overspends. The ex post review alongside a symmetric CESS should achieve this.

  In the issues paper we raised concerns about some NSPs being less responsive to financial incentives. For these NSPs, we considered higher penalties were required to protect customers from inefficient capex overspends. However, not all NSPs have consistently overspent in the past. Further, since no ex post review of capex existed previously, we do not know whether past overspends were inefficient or simply a result of forecasting error or unforeseen circumstances. To apply an asymmetric CESS in these circumstances could lead to perverse outcomes. In particular, NSPs would be greatly penalised for overspending whether or not their capex overspend is efficient. This is because the CESS would apply mechanistically without any consideration of the efficiency of the overspend. The revised NER allow us to exclude inefficient overspends from a NSP's RAB through an ex post review. Through this we can consider the efficiency of the capex overspend explicitly. This, alongside a symmetric CESS, can better address the issue of less responsive or inefficient NSPs in a more targeted way than would an asymmetric CESS. Consumers will still be protected from capex overspends since all overspends will be subject to a 30 per cent penalty and inefficient overspends will be borne entirely by NSPs.

- Our forecasting should improve meaning a symmetric CESS is more appropriate.

  One of our reasons for an asymmetric CESS was that NSPs should usually be able to spend within their allowance since allowances are likely to be upwardly biased. This could be due to asymmetric information for example. Instead of addressing the issue of upwardly biased forecasts through the incentives for capex, we now consider that this should be addressed directly through our approach to forecasting capex. There were a number of changes made to the NER in respect of capex forecasting. In addition, we are currently developing new Expenditure Forecasting Assessment Guidelines, which outline a number of new measures and techniques for determining capex allowances. To the extent that we are concerned about allowances being biased upwards, we will address this through our forecasting approach rather than through our approach to capex incentives.

- A symmetric CESS with a reward and penalty of 30 per cent will provide more balanced incentives across capex, opex and service than would an asymmetric CESS. This is because the current opex EBSS and the service target performance incentive scheme (STPIS)[2] provide an incentive of approximately 30 per cent for opex and service respectively.

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[2] AER, *Electricity Distribution Network Service Providers - Service Target Performance Incentive Scheme,* June 2008, p. 22.

Chapter 2 of this document provides more discussion on our preferred approach for the CESS. Details of how the CESS would operate are outlined in chapter 3 of the draft guidelines.

## Forecast or actual depreciation

Our proposed approach is that depreciation based on forecast capex will be the default except where no CESS applies, or there are concerns about persistent overspending or capex inefficiency. When considering whether to use actual depreciation in either of these circumstances we will consider:

- substitutability between opex and capex and the balance of incentives between opex, capex and service
- the substitutability of assets of different asset lives.

This is consistent with the approach in the issues paper. The reasons for our approach are discussed in more detail in chapter 3. Chapter 4 of the draft guidelines outlines our approach to this issue.

## Ex post measures

We are proposing to undertake an ex post review of the efficiency and prudency of capex. This review will have two purposes:

- it will inform our statement of efficiency of capex being rolled into the RAB
- it will inform our decision on whether to exclude inefficient capex overspends from the RAB.

We have proposed a two stage process for the ex post review.

- The first stage will consider a number of factors including:
  - whether the NSP has overspent
  - whether the overspend is significant
  - the NSP's history of capital expenditure
  - how the NSP's capex compares with similar NSPs.

  If we have concerns after undertaking this high level assessment, we will progress our review to stage 2.
- Stage 2 will be a more detailed assessment of the NSP's capex including an assessment of the NSP's planning and management processes and an assessment of the efficiency of capex undertaken by the NSP. To the extent that inefficient overspends are identified in stage 2, these will not be rolled into the NSP's RAB.

This process has changed from that outlined in the issues paper. While there was broad support for the staged approach in the issues paper, we were concerned that some of the stages would provide little benefit (for example, the stage considering the incentives faced by the NSP). For this reason those stages have been removed. In addition, we will now consider an NSP's management processes and practices at the same time that we undertake the more detailed assessment of its capex.

In addition to excluding inefficient overspends from the RAB, we also have the ability to exclude capitalised opex and inflated related party margins. We have broadly maintained the approach in the issues paper for these two processes.

Ex post measures are discussed in chapter 4 of this document and chapter 5 of the draft guidelines.

## How the measures work together

Taken together, the ex ante and ex post measures outlined in the guidelines should contribute to achieving the capital expenditure incentive objective. In particular, the CESS will provide NSPs with clear incentives to pursue efficiency gains through the regulatory control period. They will have a constant incentive to reduce capex irrespective of the year of the regulatory control period and whether they have overspent or underspent in total.

The ex post measures will complement the CESS to provide NSPs with an additional incentive to ensure that any overspends are efficient. Under the CESS and the ex post review together, NSPs risk losing between 30 and 100 per cent of any overspend. NSPs bear 30 per cent of the overspend whether it is efficient or not. If the overspend is found to be inefficient, however, the NSP will bear the entire cost of the overspend. In addition, we now have the ability to ensure that the RAB includes only efficient related party margins and that NSPs do not benefit from capitalising opex.

These new measures should mean that consumers pay only for efficient overspends and that consumers share part of the benefits from any capex efficiency saving.

## Consultation strategy

We are seeking direct input from interested parties into the development of the guidelines over the next few months. Positions put forward in this paper will form a basis for discussion with stakeholders.

Our approach to consultation is guided by the overarching approach that has been adopted for the Better Regulation work stream.[3] The process has already involved an issues paper, meetings with stakeholders and a public forum. Written submissions are invited in response to this explanatory statement and the draft guidelines by close of business, Friday, 20 September 2013. We are also prepared to discuss our positions directly with stakeholders either on the phone, via video conference or in person. Enquiries can be directed to incentives@aer.gov.au.

[3] AER, *Better regulation issues paper,* 10 December 2012.

# 1 Introduction

This explanatory statement is the second part of our consultation for the development of Capital Expenditure Incentive Guidelines (guidelines) for electricity NSPs. It follows from an issues paper on the guidelines released in March 2013.[4] The guidelines form part of our Better Regulation program of work following from the AEMC's changes to the NER and NGR made on 29 November 2012. The aim of these reforms is to deliver an improved regulatory framework focused on the long term interests of energy consumers.

The guidelines are concerned with introducing enhanced incentives for NSPs to pursue efficient capex during the regulatory control period. This is through the introduction of a new CESS and new ex post measures to ensure consumers pay only for efficient capex overspends.

This chapter provides an introduction and background to the guidelines. Firstly, the current arrangements for incentivising efficient capex are discussed. This is followed by a summary of the rule change process, the resulting rule changes and the scope of the guidelines. Lastly, our approach to consultation is outlined.

## 1.1 Current arrangements

The AER applies incentive based regulation to incentivise NSPs to pursue efficiency improvements in the way they undertake expenditure to provide network services.

At the start of a regulatory control period the AER sets a NSP's revenue allowance using the building block approach. This provides the NSP with revenue to cover its efficient capital costs (in the form of depreciation and a return on investment), operating costs and tax liabilities.[5]

If a NSP can provide the required service at a lower cost than what it was funded under the AER's approved revenue allowance, it can benefit by keeping some of the difference. In particular, it will still earn revenue equal to the allowance but since its costs are lower, it will make a profit. Conversely, if a NSP exceeds its allowance it will have to bear some of the costs of this.

With capex, the benefits of an underspend will be retained by the NSP until the end of the regulatory control period. At that time, the RAB will be updated for actual capex (and depreciation[6]). Where there is an underspend the updated RAB will be lower than if the NSP had spent its whole allowance. Hence, once the RAB is updated consumers will benefit from lower charges going forward. In this way, NSPs benefit during the regulatory control period if they can 'beat' the allowance. Consumers then benefit when the RAB is rolled forward. This should encourage NSPs to pursue capex efficiency improvements that will ultimately benefit both the NSP and electricity consumers.

Since NSPs only retain the benefits/losses of any underspend/overspend until the end of the regulatory control period, the power of the incentive is influenced by the year in which the underspend/overspend occurs.[7] In year one, any benefit/penalty from an underspend/overspend will last for four years before the RAB is updated for actual capex. In year five, however, the

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4 AER, *Issues paper: Expenditure incentives guidelines for electricity network service providers*, March 2013. Our Issues Paper is available on our website: http://www.aer.gov.au/node/18869.

5 For more on the building block approach, see AER, *Issues paper: Expenditure incentives guidelines for electricity network service providers*, March 2013, p. 4.

6 Either forecast or actual depreciation, as discussed in chapter 3.

7 It will also depend on whether actual or forecast depreciation is used to roll forward the RAB. Where actual depreciation is used, the power of the incentive will also be different for assets of different asset lives.

benefit/penalty will be approximately zero. Hence, the power of the incentive declines over the regulatory control period.

Prior to the NER rule changes, all capex incurred by a NSP during a regulatory control period was rolled into the NSP's RAB at the end of the period. This meant that consumers potentially bore a large share of any capex overspend incurred by the NSP. This could potentially lead to inflated prices for a long period after the NSP had overspent. It also meant that NSPs could benefit from paying inflated related party margins and from capitalising opex, again at a cost to consumers.

## 1.2 Rule changes

The changes to the NER made on 29 November 2012 were initiated by the AER in September 2011.[8] One of our concerns with the former NER was that the incentives for efficient capex did not appear to have been sufficient to ensure all NSPs remained within their capex allowances. Since all capex was automatically rolled into the RAB, NSPs could potentially benefit from overspending in the later years of the regulatory control period. This meant that consumers were potentially paying more than they should for electricity network services. To address these concerns we suggested changes to:

1. The incentives for efficient capex — we recommended that only 60 per cent of any capex overspend should be rolled into the RAB, with the remaining 40 per cent to be borne by the NSP.
2. Allow discretion to use forecast depreciation — we requested this for both transmission network service providers (TNSPs) and distribution network service providers (DNSPs) (this discretion was already provided for DNSPs).
3. Review related party margins — to ensure that only efficient related party margins are rolled into the RAB (previously all capex incurred was rolled into the RAB).
4. Review capitalisation policy changes — to ensure that NSPs do not profit from capitalising opex.

The AEMC agreed that there were issues with the existing incentives for efficient capex. It was concerned that the incentives for efficient capex declined over the regulatory control period. It was also concerned about a lack of regulatory scrutiny for capex overspends being rolled into the RAB.[9]

The AEMC's rule change gave effect to the last three of our proposals above. In response to the first proposal, the AEMC gave us the ability to develop Capital Expenditure Sharing Schemes through the Capital Expenditure Incentive Guidelines. In addition, the AEMC's rule change included a requirement for us to undertake an ex post efficiency review of capex being rolled into the RAB, and gave us the ability to disallow from the RAB any capex (above the allowance) that is not efficient. In developing these measures, the AER is required to consider a new capital expenditure incentive objective:

> The *capital expenditure incentive objective* is to ensure that, where the value of a regulatory asset base is subject to adjustment in accordance with the *Rules*, then the only capital expenditure that is included in an adjustment that increases the value of that regulatory asset base is capital expenditure that reasonably reflects the *capital expenditure criteria*.[10]

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8 For more on the rule change process, see: http://aemc.gov.au/Electricity/Rule-changes/Completed/economic-regulation-of-network-service-providers-.html

9 AEMC, *Final Position Paper: Economic Regulation of Network Service Providers, and Price and Revenue Regulation of Gas Services*, 29 November 2012, Sydney, p. vi.

10 NER, clauses 6.4A(a) and 6A.5A(a).

## 1.3 Scope of the guidelines

To give effect to the new rules on capex incentives, we are required to develop and publish Capital Expenditure Incentive Guidelines[11] covering:

- the details of any CESS we develop
- details of how we will determine whether to use depreciation based on actual or forecast capex to roll forward the RAB at the commencement of a regulatory control period
- our ex post capex review, including our process for:
  - reviewing the efficiency of capex and for assessing whether to disallow inefficient capex overspends from entering the RAB
  - assessing whether third party margins are efficient and whether these should be included in the RAB
  - assessing whether a NSP's capex includes expenditure that was treated as opex at the time of the AER's determination and whether this should be excluded from the RAB
- how the above schemes and proposals, both individually and taken together, are consistent with the capital expenditure incentive objective.[12]

The guidelines will have full effect from 2016. Before then transitional arrangements apply as outlined in appendix A.

## 1.4 Consultation process

Our consultation to date has included releasing an issues paper, holding a public forum and numerous bilateral meetings.

### 1.4.1 Issues paper

We released an Issues Paper on the Expenditure Incentives Guidelines on 20 March 2013 and received 21 written submissions in response (submissions closed on 10 May 2013).[13] Submissions were from electricity NSPs, gas network businesses, consumer representative groups and consultant groups. A summary of these submissions is at appendix D.

The issues paper covered both capex and opex incentives and outlined our initial positions on a number of key issues. In relation to capex incentives:

- We recommended a continuous asymmetric CESS with a reward of 20 to 30 per cent and a penalty of greater than 30 per cent to apply to all NSPs.
- We recommended that forecast depreciation will be the default approach for rolling forward the RAB except where a CESS does not apply or where there is persistent overspending by an NSP.
- We recommended a staged approach to the ex post review of capex.

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11 NER, clauses 6.2.8(a)(1) and 6A.2.3(a)(1).
12 NER, clauses 6.4A(a) and 6A.5A(a).
13 Our Issues Paper and submissions to the Issues Paper are available on our website: http://www.aer.gov.au/node/18869

This explanatory statement is focussed on capex incentives and is the next stage of consultation following the issues paper. The consultation on opex incentives is being progressed through a separate explanatory statement and an amended Efficiency Benefit Sharing Scheme (EBSS).[14]

### 1.4.2 Public forum and meetings

We held a joint stakeholder forum on 29 April 2013 to discuss expenditure incentives and interactions between expenditure incentives and expenditure assessments. We also attended a number of sessions with the Consumer Reference Group (CRG) to explain our initial proposals and discuss the key issues for the CRG in relation to expenditure incentives.

In addition, we held a number of bilateral meetings with key stakeholders including:

- 11 April and 15 May: meeting with SP AusNet.
- 17 April: meeting with CitiPower, Powercor and SA Power Networks.
- 22 April: meeting with TransGrid, Essential Energy, Endeavour Energy and AusGrid.
- 23 April: meeting with Ergon Energy, Energex and Powerlink.
- 10 May: meeting with Jemena.
- 14 May: meeting with Electranet.
- 5 June: meeting with Carbon + Energy Markets (CEM) on behalf of Energy Users Association of Australia (EUAA).

### 1.4.3 Key dates

Key dates for the development of the guidelines are included in table 1 below.

**Table 1 Timeline for developing the expenditure incentives guidelines**

| Date | Milestone | Description |
|---|---|---|
| 20 March | Issues paper released | Explained issues and preliminary thoughts on approach to the expenditure incentives guidelines. Invited written submissions. |
| April to May | Stakeholder meetings | Meetings with NSPs and the Consumer Reference Group. |
| 29 April | Stakeholder forum | Public forum on the issues paper and interactions with expenditure forecast assessment guidelines. |
| 10 May | Submission on issues paper due | Formal responses by stakeholders to the issues paper. |
| 9 August | Draft guidelines and explanatory statement published | Sets out AER's draft positions on incentives for efficient capital expenditure. Invites written submissions by 20 September. |
| August to October | Stakeholder consultation | Further discussions with stakeholders. |
| 20 September | Submissions on draft guidelines due | Formal responses by stakeholders to the draft guidelines. |
| 29 November | Publish final Guidelines | Publication of final capital expenditure incentive guidelines. |

[14] Available on our website www.aer.gov.au.

## 1.5 Structure

This explanatory statement is structured as follows:

- Chapter 2 discusses our proposed approach for the CESS.
- Chapter 3 discusses our proposed approach for determining whether to use depreciation based on actual or forecast capex to roll forward the RAB.
- Chapter 4 discusses our proposed approach for the new ex post measures including the statement of efficiency and the ability to exclude capex from the RAB where there is an inefficient overspend, inflated related party margin or capitalised opex.
- Appendix A discusses the transitional arrangements.
- Appendix B replicates key parts of the NER.
- Appendix C provides two worked examples on how the CESS will be calculated where capex is excluded from the RAB as a result of the ex post review.
- Appendix D summarises submissions to the Expenditure Incentives Issues Paper and views of the Consumer Reference Group.

# 2 Capital expenditure sharing scheme

This chapter outlines our draft decision on the form of CESS. The objective of the CESS is to provide an incentive for NSPs to pursue efficiency improvements in capex during the regulatory control period. This is achieved by rewarding NSPs that can outperform their allowance and penalising NSPs that overspend against their allowance.

Requirements for the CESS are contained in clauses 6.5.8A and 6A.6.5A of the NER. These provide that any CESS must be consistent with the capital expenditure incentive objective (see appendix B).[15] In addition, in developing any CESS the AER must take into account:

- the following capital expenditure sharing scheme principles:
  - NSPs should be rewarded or penalised for improvements or declines in capex efficiency
  - rewards and penalties should be commensurate with efficiencies or inefficiencies, but rewards and penalties do not have to be symmetric
- interaction of the CESS with any other schemes for efficient opex or capex
- the capital expenditure objectives (see appendix B) and, if relevant, the operating expenditure objectives.

In deciding whether to apply a CESS to a NSP, and the nature and details of any CESS that is to apply to a NSP, we must:

- make the decision in a manner that contributes to the achievement of the capital expenditure incentive objective
- take into account the capital expenditure sharing scheme principles (above) and the circumstances of the NSP.

## 2.1 Issue

A CESS is a mechanism that rewards NSPs for capex efficiency gains and penalises NSPs for capex efficiency losses. In this way it incentivises NSPs to pursue efficient capex. For the purposes of the CESS, a NSP's capex allowance is used as the best estimate of efficient capex. Hence, an overspend against the allowance counts as an efficiency loss and an underspend counts as an efficiency benefit.

In our issues paper we proposed that one CESS should apply to all NSPs. This CESS would be:

- continuous, in that the incentives would be the same for each year in the regulatory control period
- cumulative, in that the reward/penalty would only apply to the cumulative underspend or overspend for the entire regulatory control period
- asymmetric, in that the penalties for overspending would be higher than the rewards for underspending:
  - we recommended a reward of between 20 and 30 per cent and a penalty of greater than 30 per cent.

[15] NER, clauses 6.4A and 6A.5A.

## 2.2 Proposed approach

After further consideration of the issues and submissions to the issues paper, we propose that a symmetric CESS should apply to all NSPs. This CESS would be continuous and would have a power of 30 per cent. That is, if a NSP underspends against its allowance it will be provided a 30 per cent reward; if it overspends it will bear a 30 per cent penalty. The CESS benefit/penalty will form a separate building block used to determine a NSP's revenue allowance in the next regulatory control period. We consider that this form of CESS would meet the requirements under clauses 6.5.8A and 6A.6.5A of the NER, as discussed below. Two examples demonstrating how the CESS would work in practice are provided at the end of this chapter.

## 2.3 Reasons for the proposed approach

In reaching our draft decision on the form of the CESS, we have considered a number of design elements relevant to the capital expenditure sharing scheme principles, the capital expenditure objectives and the capital expenditure incentive objective. These include:

- whether the scheme should provide continuous incentives
- whether the scheme should be symmetric or asymmetric
- what rewards and penalties the scheme should provide
- how many schemes should apply
- whether any categories of capex should be excluded from the CESS.

Each of these issues is discussed in turn below.

### 2.3.1 Continuity

We consider that the CESS should provide continuous incentives for NSPs to pursue efficient capex.

Continuity refers to whether the incentives for efficient capex are the same in each year of a regulatory period. In the issues paper we noted that the current incentives for efficient capex decline over the regulatory control period. This could lead to perverse outcomes including:

- Overspending in year 5: since there is currently no incentive for efficient capex in year 5 NSPs can overspend without being penalised for it. That is, consumers will bear the whole overspend. This could lead NSPs to overspend in year 5.
- Distorted decisions on whether to undertake capex or opex: since the incentives for capex decline while the incentives for opex are constant, this could distort NSPs' decision making on whether to undertake capex or opex.
- Less efficient capex since a NSP's work program would be less stable: unnecessary peaks and troughs in a NSP's capex can result in higher costs than a more stable work program.

We proposed a continuous CESS in our issues paper. This was largely supported by stakeholders.[16] Only a couple of consumer representative groups[17] did not support the principle of continuity.

[16] CitiPower, Powercor and SA Power Networks, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 15; Energy Networks Association (ENA), *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 18; Energex Limited, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 2; EnerNOC, *Submission on*

Public Interest Advocacy Centre (PIAC) was concerned that it would be difficult to provide constant incentives for assets of different lives. CEM on behalf of the EUAA stated that declining incentives are appropriate since it is more difficult to forecast further into the future. It also noted that declining incentives might have the benefit of reducing the incentives for NSPs to defer capex between regulatory control periods.

In terms of the effect of asset life on the power of the incentive, this is an issue with using depreciation based on actual capex rather than forecast capex to roll forward the RAB. We will discuss this issue later in the context of whether to use actual or forecast depreciation to roll forward the RAB (see chapter 3). In summary, to the extent that we use forecast depreciation to roll forward the RAB, asset life does not affect the power of the incentive.

The issues identified by CEM have some merit. It is more difficult to accurately forecast capex further into the future. For this reason there is some logic to having incentives that decline over the period. Declining incentives could also lead to less inter-period deferral. However, the issue of deferral is not straightforward and it is difficult to know when a decision to defer capex is efficient or opportunistic. We consider that the issue of capex deferral is better addressed through our approach to forecasting and assessing proposed capex.[18] Overall, we consider that the potential issues raised by CEM are less problematic than the potential outcomes that could occur from declining incentives (as outlined above).

In addition, we believe that a continuous CESS will better meet the NER requirements under clauses 6.5.8A and 6A.6.5A. In particular, a continuous scheme will provide rewards/penalties that are commensurate with efficiencies/inefficiencies. In comparison, with declining incentives the reward/penalty would decline over the period for a constant efficiency gain/loss. In addition, since there are constant incentives for opex and service, a CESS with constant incentives will be easier to ensure balance with opex and service incentives. Hence, our draft decision is that any CESS should be continuous.

### 2.3.2 Symmetry of the scheme

Our proposal is for a symmetric CESS.

In our issues paper we proposed that an asymmetric scheme with higher penalties than rewards should apply to all NSPs. This was because:

- We were concerned a high reward for underspending could lead NSPs to underinvest or defer capex to the detriment of service.
- We thought that NSPs should usually be able to spend within their allowance since:
  - we are required to provide 'a reasonable opportunity to recover at least the efficient costs the operator incurs'[19]
  - forecasts are likely biased upwards given asymmetric information

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*AER Expenditure Incentives Issues Paper*, May 2013, p. 3; Major Energy Users Inc. (MEU), *Submission on AER Expenditure Incentives Issues Paper*, April 2013, p. 26; SP AusNet, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 1; Total Environment Centre (TEC), *Response to Expenditure Incentives Guidelines Issues Paper*, May 2013, p. 3.

17 Energy Users Association of Australia (EUAA), *Submission on AER Expenditure Incentives Issues Paper*, May 2013, pp. 13-17; and PIAC, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, pp. 8-9.

18 See AER, *Draft Expenditure Forecasting Assessment Guidelines*, August 2013.

19 Under the revenue and pricing principles (s. 7A).

- re-opening provisions, pass throughs and contingent projects protect NSPs from significant overspends in certain circumstances.

- Some NSPs are less responsive to financial incentives meaning greater protection of consumers from overspending is warranted.

The issue of symmetry was a key issue for a number of stakeholders. In general, NSPs supported the CESS being symmetric[20] while consumer representative groups supported an asymmetric scheme.[21]

Stakeholders' reasons for supporting a symmetric CESS included:

- It is easier to align the incentives for efficient capex, opex and service with a symmetric CESS.[22]
- A symmetric scheme is less likely to penalise NSPs for forecasting error compared with an asymmetric scheme with a higher penalty than reward.[23]
- Since overspending is not necessarily inefficient, overspends should not be subject to a higher penalty than should underspends.[24]
- An asymmetric scheme could lead to imprudent capex once a NSP exceeds its allowance.[25]
- NSPs cannot ensure they spend within their allowances since allowances are not biased upwards and pass throughs, re-openers and contingent projects have high thresholds.[26]
- If forecasts are biased, this should be addressed through the forecasting methodology rather than through the CESS.[27]
- Not all NSPs have overspent in the past so the case for an asymmetric scheme is not clear.[28]
- The existence of the ex post exclusion provision means that the incentives are already asymmetric and no further asymmetry is warranted.[29]

Supporters of an asymmetric CESS agreed with the reasons for asymmetry outlined in issues paper and also noted that an asymmetric scheme would:

- better mirror what happens in the competitive market[30]

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20 ActewAGL Distribution, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 3; APA Group, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 2; CitiPower et al, *Submission on Issues Paper*, pp. 4-6; ENA, *Submission on Issues Paper*, p. 7; Energex, *Submission on Issues Paper*, p. 3; New South Wales Distribution Network Service Providers (NSW DNSPs), *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 3; Grid Australia, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, pp. 9-15; Jemena, *Submission on AER Expenditure Incentives Issues Paper*, May 2013, p. 4; SP AusNet, *Submission on Issues Paper*, p. 2.

21 EUAA, *Submission on Issues Paper*, pp. 12-13; MEU, *Submission on Issues Paper*, p. 26; PIAC, *Submission on Issues Paper*, pp. 10-11, TEC, *Submission on Issues Paper*, p. pp. 3-4.

22 EnerNOC, *Submission on Issues Paper*, p. 3; Grid Australia, *Submission on Issues Paper*, pp. 10-11; NSW DNSPs, *Submission on Issues Paper*, p. 1.

23 APA Group, *Submission on Issues Paper*, p. 2; NSW DNSPs, *Submission on Issues Paper*, p. 8.

24 CitiPower et al, *Submission on Issues Paper*, p. 4.

25 ActewAGL, *Submission on Issues Paper*, p. 2.

26 CitiPower et al, *Submission on Issues Paper*, p. 5, ENA, *Submission on Issues Paper*, p. 12; Grid Australia, *Submission on Issues Paper*, pp. 3-4.

27 Energex, *Submission on Issues Paper*, p. 3.

28 Grid Australia, *Submission on Issues Paper*, pp. 11-12, SP AusNet, *Submission on Issues Paper*, pp. 2-3.

29 SP AusNet, *Submission on Issues Paper*, p. 3.

30 MEU, *Submission on Issues Paper*, p. 7.

- better protect consumers from inefficient capex overspends (especially in the case of government-owned NSPs) without limiting the extent to which customers will benefit from efficiency savings[31]

- protect customers given that the current high prices in some jurisdictions were largely driven by capex overspends in the past.[32]

After further consideration of the issues, we are now proposing that the CESS be symmetric. The rationale for this is discussed below.

A number of our reasons for an asymmetric scheme were related to concerns about NSPs receiving generous capex allowances. This was largely contested by NSPs.[33] NSPs also noted that the thresholds for pass throughs, re-openers and contingent projects are high, meaning they provide little comfort against cost overruns.[34] We acknowledge that these thresholds are, and should be, high.

Energex stated that if we are concerned about capex allowances being systematically biased upwards, we should address this through our forecasting methodology rather than through the introduction of an asymmetric CESS. We acknowledge that these guidelines are being developed as part of a wider Better Regulation reform package. This package includes new measures and techniques for determining allowances under the Expenditure Forecasting Assessment Guidelines. A number of rule changes also clarified the AER's discretion in setting the capex allowance and in applying the capital expenditure criteria. In this context, we intend to improve our methods for forecasting capex into the future. Hence, any past or present concerns about generous allowances should decline into the future. To the extent that concerns remain, this may be better addressed directly through the Expenditure Forecasting Assessment Guidelines[35] rather than through any CESS. In this context, it would appear more appropriate to apply a symmetric CESS rather than an asymmetric CESS. This has the added benefit that forecasting errors will be treated equally whether they result in an underspend or an overspend.[36]

Another key reason for an asymmetric scheme in our issues paper was to protect consumers where NSPs are less responsive to financial incentives. While some NSPs may be less responsive to financial incentives, or may pursue multiple objectives (not always financial), this does not characterise all NSPs. As noted by Grid Australia and SP AusNet, not all NSPs have overspent in the past meaning the case for applying an asymmetric scheme to all NSPs is not clear. If we were to apply an asymmetric CESS to all NSPs to address concerns with only a few NSPs this could lead to perverse outcomes. In particular, where a NSP undertakes only efficient capex but exceeds its allowance, it would be overly penalised for this.[37] Given we have the ability to exclude inefficient overspends from a NSP's RAB through an ex post review, this may be a better means of addressing NSPs that are less responsive to financial incentives. Indeed, SP AusNet noted that the existence of the ex post measures already means the capex incentives are asymmetric. These ex post measures

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31 EUAA, *Submission on Issues Paper*, pp. 12-13.

32 PIAC, *Submission on Issues Paper*, pp. 10.

33 ActewAGL, *Submission on Issues Paper*, p. 3; CitiPower et al, *Submission on Issues Paper*, p. 4; ENA, *Submission on Issues Paper*, pp. 10-11; Grid Australia, *Submission on Issues Paper*, p. 12.

34 CitiPower et al, *Submission on Issues Paper*, p. 5; ENA, *Submission on Issues Paper*, p. 12

35 AER, *Draft Expenditure Forecasting Assessment Guidelines*, August 2013.

36 Submissions from NSW DNSPs and APA Group were concerned that an asymmetric scheme would overly penalise NSPs for forecasting error. See NSW DNSPs, *Submission on Issues Paper*, p. 7; and APA Group, *Submission on Issues Paper*, p. 2.

37 CitiPower, Powercor and SA Power Networks noted that since overspending is not necessarily inefficient, overspends should not be subject to a higher penalty than should underspends. See CitiPower et al, *Submission on Issues Paper*, p. 4.

provide a significant disincentive to overspend since NSPs could lose up to 100 per cent of any overspend we find inefficient or imprudent.

In the issues paper we were also concerned that high rewards for underspending could incentivise capex deferral.[38] We still consider this to be a risk. However, this is more to do with the power of the reward rather than the symmetry of the CESS. The power of the scheme is discussed in the next section.

A symmetric scheme may also be more appropriate since this is the first time we have introduced a CESS. In particular, it is less likely to result in perverse outcomes than would an asymmetric CESS. It may be that a symmetric scheme coupled with the ex post review is sufficient to ensure that NSPs remain within their capex allowances. Introducing a symmetric CESS first allows us to review how NSPs have responded to the CESS with the option to change the CESS if it has not delivered the desired outcomes. We also note that the decision on whether to apply the CESS to a particular NSP will be made as part of the usual regulatory determination process undertaken before the commencement of each regulatory control period.

In regards to the requirements under the NER, a symmetric scheme would better promote efficient substitution between capex and opex than would an asymmetric CESS. In particular, it would be difficult to balance the incentives for opex and capex with an asymmetric CESS and a symmetric EBSS. This could lead to perverse outcomes for substitution between capex and opex. In comparison, if both schemes are symmetric, it is easier to balance the incentives across opex and capex. EnerNOC noted that its key concern was that there are balanced incentives across opex and capex. NSW DNSPs and Grid Australia noted that a symmetric scheme was important to achieving balanced incentives between capex, opex and service. In principle, we consider that a symmetric scheme would best meet the requirements under clauses 6.5.8A and 6A.6.5A of the NER.

Given the above considerations we consider that the CESS should be symmetric.

### 2.3.3 Level of the reward and penalty

Our proposal is that the CESS should provide a reward and penalty of 30 per cent.

Apart from commenting on the symmetry of any CESS, few submissions commented specifically on the strength of the reward and penalty under the CESS. Suggested rewards were in the range of 20 to 35 per cent and penalties were in the range of 20 to 100 per cent. See table 2 for a summary of stakeholder views on the power of the reward and penalty.

There are two key issues that we consider are relevant in setting the power of the incentive for the CESS:

- The reward should not be so high that it incentivises inefficient capex deferral. This could result in consumers paying too much for the capex (since they might fund the same project in multiple regulatory control periods). Alternatively, consumers could experience a decline in service levels.
- The power of the incentive should be set so as to achieve balance between the incentives for capex, opex and service.

[38] This concern was also noted in the submission from the Victorian Government Department of State Development and Business Innovation (DSDBI). See DSDBI, *Submission on Issues Paper*, pp. 1-2.

**Table 2 Stakeholder views on the power of the incentive**

| Stakeholder | Reward | Penalty |
|---|---|---|
| PIAC | ~ 20 % | 50 % |
| EUAA | 35 % | 50 % for private; 70 % for government |
| MEU | No comment | 100 % |
| TEC | No comment | > 30 % |
| NSW DNSPs | Moderate | Moderate |
| Energex | Low | Low |
| Ergon Energy | Low | Low |
| SP AusNet | 20 - 30 % | 20 - 30 % |

In respect of the level of the reward, the Victorian Government Department of State Development and Business Innovation (DSDBI) noted the experience of the Victorian Essential Service Commission (ESC) in applying a capex sharing scheme between 2002 and 2005.[39] The scheme was similar to the AER's EBSS in that it applied a five year roller with a resulting power of around 30 per cent. In reviewing the scheme in 2005 the ESC was concerned that it had incentivised greater levels of inter-period capex deferral. In particular, NSPs had generally underspent but asked for much higher capex allowances for the next regulatory period. This could have led to consumers funding capex in two periods and paying an efficiency payment as well. This concern led the ESC to remove the scheme for the 2006-10 regulatory period.[40]

While we acknowledge this concern we believe that it is somewhat mitigated if:

- The power of the reward is moderate rather than high.
- Our capex forecasting becomes better so we are less likely to fund capex that is ultimately not required in the period. In some circumstances this could make use of the contingent project provisions in the NER.
- The incentives for capex, opex and service are balanced so that any capex deferral either increases opex or reduces payments under the Service Target Performance Incentive Scheme (STPIS).

In particular, we are developing our approach to forecasting capex through the development of Expenditure Forecasting Assessment Guidelines. The associated explanatory statement for the draft version of these guidelines discusses our approach to forecasting capex and monitoring capex deferral.[41] For example, in assessing capex forecasts we will consider levels of capex deferral in previous periods and the outcomes delivered by the NSP in those periods. Such outcomes will be included into our replacement and augmentation modelling. We will also be monitoring capex deferral on an ongoing basis through our annual performance reports.

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39 DSDBI, *Submission on Issues Paper*, pp. 1-2.

40 For more on the ESC's decision, see ESC, *Final Decision: Electricity Distribution Price Review 2006-10,* February 2006 http://www.royalcommission.vic.gov.au/getdoc/d09c58ae-4770-4cae-9435-586148b53398/PAL.019.001.0636

41 AER, *Explanatory statement: Draft Expenditure Forecasting Assessment Guidelines*, August 2013.

The second consideration in setting the power of the incentive is that the incentives for efficient capex should be balanced with the incentives for efficient opex and service. As discussed above, this goes towards achieving efficient capex and opex as required under the NER. We believe that the best way to achieve this is to set the power of the CESS equal to the power of the existing EBSS and STPIS. That is, a reward and penalty of 30 per cent.

### 2.3.4 Number of schemes

Our proposal is for one CESS to apply to all NSPs. This is consistent with our proposal in the issues paper.

Stakeholder views on the number of schemes varied:

- MEU supported one scheme applying to all NSPs.[42]
- CEM on behalf of EUAA stated that two schemes should be developed, one for privately owned NSPs and one for government owned NSPs.[43]
- Grid Australia and APA Group supported there being two schemes on the basis of NSP type; that is, distribution or transmission. Energy Networks Association (ENA) also suggested that NSP type was an important consideration.[44]
- PIAC and Total Environment Centre's National Electricity Market Advocacy (TEC) suggested that perhaps both ownership and type are important, meaning there could be four schemes.[45]
- Six stakeholders suggested that while the scheme could be broadly the same, the power of scheme (or other aspects of the scheme) could be varied to account for differences between NSPs (performance, jurisdiction, type and ownership were mentioned as relevant factors to be considered).[46]

We have considered developing different schemes on the basis of ownership and NSP type. We have also considered whether the CESS should be varied on a case by case basis.

CEM (on behalf of EUAA) and PIAC noted a number of reasons why ownership could influence the responsiveness of NSPs to financial incentives. While these reasons have been discussed widely in the literature, it is not entirely clear what this means for incentive design. CEM suggested that the penalty for overspending should be higher for government owned NSPs. However, to the extent that government owned NSPs are potentially less responsive to financial incentives, it is not clear that a higher powered incentive would achieve the desired results. Instead we consider that perhaps some other form of mechanism is justified. In particular, we now have the ability to exclude inefficient capex overspends from the RAB ex post. To the extent that NSPs are less responsive to financial incentives, the ex post review should provide some protection against customers paying for inefficient overspends. In addition, to the extent that NSPs (government or privately owned) may have incentives to overspend due to having a lower WACC, this can also be addressed through the ex post review. The ex post review will consider the efficiency or otherwise of all overspends regardless of the

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42 MEU, *Submission on Issues Paper*, p. 27.
43 EUAA, *Submission on Issues Paper*, pp. 12-13.
44 APA Group, *Submission on Issues Paper*, p. 3; Grid Australia, *Submission on Issues Paper*, p. 9.
45 PIAC, *Submission on Issues Paper*, p. 21; TEC, *Submission on Issues Paper*, p. 3.
46 CitiPower et al, *Submission on Issues Paper*, p. 15; ENA, *Submission on Issues Paper*, pp. 21-22; Energex, *Submission on Issues Paper*, pp. 4-5; Ergon Energy, *Submission on Issues Paper*, p. 7; Jemena, *Submission on Issues Paper*, p. 2; SP AusNet, *Submission on Issues Paper*, pp. 3-4.

cause of the overspend. For this reason, we do not consider different schemes are warranted on the basis of NSP ownership.

While Grid Australia and APA Group noted a number of differences between transmission and distribution NSPs, they did not state the implications for capex incentive design.[47] While we understand that there are differences between TNSPs and DNSPs, we are not convinced that these difference warrant different CESSs. For this reason we have not developed different schemes for TNSPs and DNSPs.

Other stakeholders supported a flexible scheme that could be varied to suit the individual characteristics of different NSPs. While this approach has some appeal, it is difficult to determine what readily observable factors would in practice influence a change of approach between NSPs and how these could be precisely applied to affect the design of the scheme. In addition, this approach would appear less warranted under a moderate symmetric CESS such as the scheme we are proposing.

Given this, our preference is for an approach that provides certainty to NSPs rather than introducing additional discretion at the time of the determination.[48] In summary, our preference is to apply the same CESS to all NSPs.

### 2.3.5 Exclusions from the scheme

We are proposing not to allow for any exclusions from the CESS. We did not put forward an initial position on whether certain categories of capex should be excluded from the CESS in our issues paper. Instead we invited stakeholders to comment on the issue.

A number of stakeholders suggested that certain types of capex should be excluded from the operation of the CESS.[49] Potential categories of capex that were suggested for exclusion included capex driven by changes in:

- economic conditions[50]
- customer demand (including customer driven extensions/expansions)[51]
- actual growth[52]
- legislative or regulatory obligations.[53]

Other stakeholders[54] suggested that we could include criteria for excluding capex from the CESS in the guidelines and then determine what categories of capex should be excluded at each regulatory period as part of the usual determination process.

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47 APA Group, *Submission on Issues Paper*, p. 3; Grid Australia, *Submission on Issues Paper*, p. 9.

48 This approach was supported by Energex and Grid Australia. See Energex, *Submission on Issues Paper*, p. 6; Grid Australia, *Submission on Issues Paper*, pp. 2-3.

49 ActewAGL, *Submission on Issues Paper*, p. 3; CitiPower et al, *Submission on Issues Paper*, p. 6; ENA, *Submission on Issues Paper*, pp. 22-23; Energex, *Submission on Issues Paper*, p. 5; Ergon Energy, *Submission on Issues Paper*, p. 7; Grid Australia, *Submission on Issues Paper*, p. 33; Jemena, *Submission on Issues Paper*, pp. 4-5; MEU, *Submission on Issues Paper*, pp. 27-28; NSW DNSPs, *Submission on Issues Paper*, p. 2; PIAC, *Submission on Issues Paper*, p. 22; SP AusNet, *Submission on Issues Paper*, p. 4.

50 NSW DNSPs, *Submission on Issues Paper*, p. 2.

51 NSW DNSPs, *Submission on Issues Paper*, p. 2.

52 MEU, *Submission on Issues Paper*, pp. 27-28.

53 NSW DNSPs, *Submission on Issues Paper*, p. 2.

Some stakeholders also suggested that capex associated with contingent projects, pass throughs and re-openers should be excluded from the CESS.[55] We are proposing that for the purposes of calculating the CESS the allowance will include any approved capex associated with contingent projects, pass throughs and re-openers. In this way, approved capex for contingent projects, pass throughs and re-openers will have the same status as the rest of the NSP's capex allowance. This allows the NSP the same opportunity to benefit from efficiency gains in respect of these categories of capex as for all other categories of capex. We consider this to be more appropriate than simply excluding these categories of capex from the CESS.

In response to the other suggested exclusions, we are not convinced that any categories of capex should be excluded from the operation of the CESS. In regards to possible forecasting error, the application of a symmetric scheme will mean that overs and unders will be treated equally. In relation to capex that is outside of a NSP's control, application of the scheme will mean that the NSP bears 30 per cent of the cost of any unforseen event that requires additional capex. Conversely, if a cost does not arise, the NSP will save 30 per cent of the avoided cost. If the CESS did not apply however, the amount to be borne by the NSP would depend on the year in which the cost (cost saving) occurs. For example, the power of the incentive can be anything from around 23 per cent in year 1 of the regulatory control period to close to zero per cent in year 5 of the regulatory control period.[56] We see no reason why this should be the case and instead view 30 per cent as a fair sharing of risks between NSPs and their customers. Hence, we have not provided for exclusions from the CESS in our draft guidelines.

### 2.3.6 Worked examples

This section works through two examples to illustrate how the CESS will work in practice. These examples can also be found in the sheets named 'ES - example 1' and 'ES - example 2' in the CESS excel model that was released for consultation alongside this explanatory statement.[57]

#### Example 1: Cumulative underspend over the period

Assume that a NSP's capex allowance and actual expenditure are that shown in table 3. The resulting underspend is given by subtracting the actual capex from the allowance.

**Table 3 NSP capital expenditure allowance and actual capital expenditure ($ million)**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Capex allowance | 300 | 330 | 270 | 300 | 330 |
| Actual capex | 280 | 310 | 300 | 290 | 320 |
| Underspend | 20 | 20 | -30 | 10 | 10 |

We then need to convert the underspends into their net present value (NPV) at the end of year 5. This is done by multiplying the underspend by the relevant discount rate. In this example, the discount rate

54 ActewAGL, *Submission on Issues Paper*, p. 3; CitiPower et al, *Submission on Issues Paper*, p. 6; ENA, *Submission on Issues Paper*, pp. 22-23; Jemena, *Submission on Issues Paper*, pp. 4-5; SP AusNet, *Submission on Issues Paper*, p. 4.

55 CitiPower et al, *Submission on Issues Paper*, p. 6; Energex, *Submission on Issues Paper*, p. 5.

56 If forecast depreciation is used to roll forward the RAB and we apply a weighted average cost of capital of 6 per cent we get an incentive power of just around 23 per cent in year one on the regulatory control period. The incentive power declines towards zero per cent in year 5.

57 Available on our website: http://www.aer.gov.au/node/18869.

is calculated on the basis of a weighted average cost of capital (WACC) of 6 per cent. Since capex is assumed to occur mid-year, we use a mid-year discount rate.[58] The resulting discount rates and the NPV of the underspend is given in table 4.

**Table 4 Discount rate and net present value of the underspend**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Discount rate (mid-year) | 1.30 | 1.23 | 1.16 | 1.09 | 1.03 |
| NPV underspend ($ million) | 26.00 | 24.52 | -34.70 | 10.91 | 10.30 |

The total underspend in NPV terms is given by summing the NPV of the underspends in years 1 to 5.

*Total NPV underspend = $26 million + $24.52 million - 34.7 million + $10.91 million + $10.3 million = $37.03 million*

To work out the NSP's share of the total NPV underspend, the sharing ratio is applied to the total NPV underspend.

*Sharing ratio = 30 per cent*

*NSP share = 30 per cent x $37.03 million = $11.11 million*

So now we know that the NSP should recover $11.11 million in total. We then need to account for the return on the underspend that the NSP has already recovered during the regulatory control period. This is in the form of retained return on capital. We need to account for this to ensure that the CESS provides constant incentives. That is, so that the benefit/penalty of an underspend/overspend is equal in each year of the regulatory period.

It is assumed that the return on capital accrues at the end of each year. For each underspend the NSP will get a half year of retained return on capital in the same year. In following years the NSP will gain a full year of retained return on capital.

- To calculate a half year of retained return on capital, the underspend is multiplied by $[(1 + WACC)^{0.5} - 1)]$.
- To calculate a full year of retained return on capital, the underspend is simply multiplied by the WACC.

This is shown in table 5. The benefit for each year is shown in one row with the equations for calculating that benefit shown in the following row for reference. To get the final benefit for each year, the columns are summed together. To express this in NPV terms, we then apply a discount rate. Since these values accrue at the end of the year, we need a different discount rate from that applied in table 4.[59]

[58] This is calculated as $1/(1 + WACC)^{n-5.5}$ where n is the relevant year of the regulatory period (so, 1 in year one, for example).

[59] This is calculated as $1/(1 + WACC)^{n-5}$ where n is the relevant year of the regulatory period (so, 1 in year one, for example).

**Table 5 Retained return on capital ($ millions)**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Year 1 benefit | 0.59 | 1.20 | 1.20 | 1.20 | 1.20 |
| Year 1 calculation | 20 x $[(1.06)^{0.5} - 1]$ | 20 x 0.06 | 20 x 0.06 | 20 x 0.06 | 20 x 0.06 |
| Year 2 benefit | | 0.59 | 1.20 | 1.20 | 1.20 |
| Year 2 calculation | | 20 x $[(1.06)^{0.5} - 1]$ | 20 x 0.06 | 20 x 0.06 | 20 x 0.06 |
| Year 3 benefit | | | -0.89 | -1.80 | -1.80 |
| Year 3 calculation | | | -30 x $[(1.06)^{0.5} - 1]$ | -30 x 0.06 | -30 x 0.06 |
| Year 4 benefit | | | | 0.30 | 0.60 |
| Year 4 calculation | | | | 10 x $[(1.06)^{0.5} - 1]$ | 10 x 0.06 |
| Year 5 benefit | | | | | 0.3 |
| Year 5 calculation | | | | | 10 x $[(1.06)^{0.5} - 1]$ |
| Annual benefit | 0.59 | 1.79 | 1.51 | 0.90 | 1.50 |
| Discount rate (end of year) | 1.26 | 1.19 | 1.12 | 1.06 | 1.00 |
| NPV annual benefit | 0.75 | 2.13 | 1.70 | 0.95 | 1.50 |

To get the total benefit of the retained return on capital, the NPV annual benefits are summed together ($0.75 million + $2.13 million + $1.70 million + $0.95 million + $1.50 million). This gives $7.03 million.

To calculate the resulting CESS payment to go to the NSP, the benefit already retained by the NSP is subtracted from the NSP's share of the underspend.

*CESS payment = $11.11 million - $7.03 million = $4.08 million*

Hence, the NSP will receive $4.08 million under the CESS in the next regulatory control period to reward it for the net efficiency gain made during the previous regulatory control period.

### Example 2: Overspend in year 3

Another example is provided below. In this example there is a $20 million overspend in year 3. Table 6 shows the capex allowance, actual capex, overspend and the cost of the return on the overspend. In particular, the overspend in year 3 leads to a financing cost for a half year in year 3 and a full year in years 4 and 5 (see row called 'Year 3 overspend cost'). The half year cost is calculated as $20 million x $[(1 + WACC)^{0.5} - 1]$ (equalling $0.59 million). The cost in years 4 and 5 is calculated as $20 million x WACC (equalling $1.20 million).

**Table 6 Example with a single overspend in year 3 ($ million)**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Capex allowance | 100 | 100 | 100 | 100 | 100 |
| Actual capex | 100 | 100 | 120 | 100 | 100 |
| Overspend | 0 | 0 | 20 | 0 | 0 |
| Year 3 overspend cost | 0 | 0 | 0.59 | 1.20 | 1.20 |
| Discount rate (mid-year) | 1.30 | 1.23 | 1.16 | 1.09 | 1.03 |
| Discount rate (end of year) | 1.26 | 1.19 | 1.12 | 1.06 | 1.00 |
| NPV overspend | 0 | 0 | 23.14 | 0 | 0 |
| NPV year 3 cost | 0 | 0 | 0.66 | 1.27 | 1.20 |

Table 7 shows the calculations for the CESS payment:

- The total overspend is simply the NPV of the underspend in year 3, $23.14 million.
- The NSP share of the overspend is then calculated. This is given by multiplying the total overspend by the sharing ratio ($23.14 million x 30 per cent = $6.94 million).
- The total cost of financing the overspend is then calculated as the sum of all benefits recovered/costs borne in years 1 to 5 ($0.66 million + $1.27 million + $1.2 million = $3.14 million).
- The CESS payment is then calculated as the NSP's share of the overspend minus the financing costs already borne by the NSP ($6.94 million - $3.14 million = $3.80 million).

**Table 7 CESS calculations**

| | Calculation | Result |
|---|---|---|
| Total NPV overspend | NPV overspend in year 4 | $23.14 million |
| NSP share of overspend | $23.14 million x 30 % | $6.94 million |
| Total cost of financing the overspend | $0.66 million + $1.27 million + $1.20 million | $3.14 million |
| CESS penalty | $6.94 million - $3.14 million | $3.80 million |

A $3.80 million penalty will apply to the NSP in the next regulatory period due to it overspending by $20 million in year 3.

# 3 Use of actual or forecast depreciation

This chapter outlines our approach to deciding whether to use actual or forecast depreciation to roll forward the RAB at the end of a regulatory control period.

The incentives for efficient capex come from the way the RAB is rolled forward at the end of a regulatory control period. Assuming that the RAB is rolled forward for actual (rather than forecast) capex, this has an inherent incentive power. In particular, in the absence of a CESS, this will lead to a declining incentive over the regulatory control period. The CESS proposed in chapter 2 addresses this declining incentive by accounting for the NSP's retained return on the overspend/underspend during the regulatory control period.

The other factor that influences the power of the incentive is the form of depreciation used to roll forward the RAB. When updating the RAB for actual capex, depreciation can be based on actual capex (called actual depreciation) or forecast capex (called forecast depreciation). Using forecast depreciation means that a NSP's actual capex performance will not influence the amount of depreciation used to roll forward the RAB at the end of a regulatory control period. In contrast, use of actual depreciation increases the incentive for efficient capex:

- If there is a capex overspend, actual depreciation will be higher than forecast depreciation. This means that the RAB will increase by a lesser amount than if forecast depreciation were used. Hence, the NSP will earn less revenue into the future (i.e. it will bear more of the cost of the overspend into the future).
- If there is a capex underspend, actual depreciation will be lower than forecast depreciation. This means that the RAB will increase by a greater amount than if forecast depreciation were used. Hence, the NSP will earn greater revenue into the future (i.e. it will retain more of the benefit of an underspend into the future).

Under the NER we have the flexibility to roll forward the RAB on the basis of either actual or forecast depreciation.[60] We are required to set out our approach to making this decision in the guidelines.[61] In making this decision we are required to consider:

- the capital expenditure incentive objective (see appendix B)
- other incentives the NSP has to undertake efficient capex
- substitution possibilities between assets with different lives
- the extent of overspending and inefficient overspending relative to the allowed forecast.[62]

## 3.1 Issue

The choice of depreciation approach is one part of the overall capex incentive framework and needs to be considered in that context. Where a CESS is applied, a NSP will already have incentives to pursue capex efficiencies. The use of forecast depreciation would maintain these incentives whereas the use of actual depreciation would increase these incentives.

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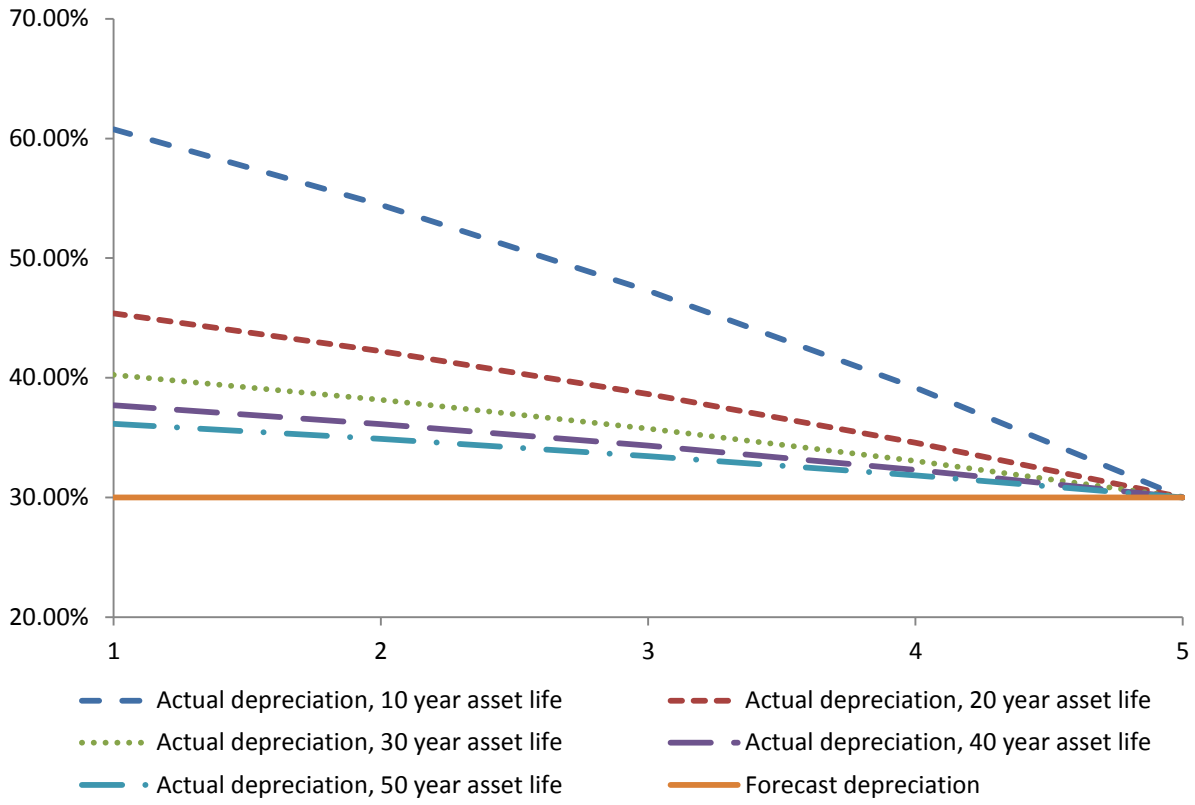
60 NER, clauses S6A.2.2B(a) and S6.2.2B(a).
61 NER, clauses 6A.5A(b)(3) and 6.4A(b)(3).
62 NER, clauses S6A.2.2B(b)(c) and S6.2.2B(b)(c).

The power of the incentive when using actual depreciation alongside a symmetric CESS will decline over the regulatory control period and with the life of the asset. In contrast, use of forecast depreciation alongside a symmetric CESS will result in an incentive power equal to that of the CESS. So for the CESS we are proposing, the combined power of the incentive with the CESS and using forecast depreciation will be 30 per cent in each year of the regulatory control period. This is shown in figure 2 below.

These outcomes differ from those that would occur in the absence of a CESS. This is because the CESS ensures a constant incentive of 30 per cent in each year by taking into account the return on the underspend/overspend during the period. Without a CESS, both depreciation approaches (alongside use of actual capex to roll forward the RAB) provide a declining incentive over the regulatory control period. However, the incentive under actual depreciation will always be higher than the incentive under forecast depreciation. Further, the incentive under actual depreciation will vary by asset life (whereas the incentive does not vary by asset life when using forecast depreciation).[63]

**Figure 2 Incentive power using actual or forecast depreciation alongside the CESS**




In our issues paper we proposed that forecast depreciation should be the default approach except in circumstances where there is no CESS or where a NSP has persistently overspent against its capex allowance. In considering whether to apply actual depreciation in either of these circumstances we would consider:

- substitutability between opex and capex and the balance of incentives between opex and capex

[63] For more on the incentive properties of using actual or forecast depreciation to roll forward the RAB, see: Economic Insights, *The use of actual or forecast depreciation in energy network regulation*, May 2012 http://www.aemc.gov.au/Media/docs/12-18675-Economic-Insights---Actual-vs-Forecast-Depreciation---for-publication-5e0d441a-8289-4881-8d0b-df2be8a04f95-0.pdf

- the balance of incentives with service performance schemes
- the relative incentive for expenditure on assets with different asset lives.

## 3.2 Proposed approach

We propose that forecast depreciation should be the default approach for rolling forward the RAB except where:

- a NSP is not subject to a CESS, or
- a NSP has persistently overspent on capex or persistently incurred inefficient capex.

In making our decision on whether to use actual depreciation in either of these circumstances we will consider:

- the substitutability between capex and opex and the balance of incentives between these
- the balance of incentives with service
- the substitutability of assets of different asset lives.

This approach is consistent with that in the issues paper.

## 3.3 Reasons for the proposed approach

The majority of stakeholders that commented on the form of depreciation supported our position in the issues paper that forecast depreciation should be the default approach where a CESS is in place.[64] Only CitiPower, Powercor and SA Power (in their joint submission) preferred actual depreciation.[65]

Grid Australia disagreed that actual depreciation should be considered where there is persistent overspending. It suggested that persistent inefficiency is the relevant issue rather than persistent overspending.[66]

Only three parties commented on the factors that we would consider if we were to consider applying actual depreciation. These parties supported our approach in the issues paper.[67]

Given that we are recommending a symmetric CESS to apply to all NSPs, and the general support for our approach in the issues paper, we maintain that forecast depreciation should be the default approach. This is because we can already choose the strength of the incentive through the CESS and use of forecast depreciation results in constant incentives across the regulatory control period and across assets of different lives. In comparison, actual depreciation would result in a declining incentive over the regulatory control period. Further, use of actual depreciation provides a higher incentive for assets with shorter lives. This is because for shorter lived assets, more of the depreciation will occur during the regulatory period than for longer lived assets. This could potentially

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64 COSBOA, *Submission on Issues Paper*, p. 13; DSDBI, *Submission on Issues Paper*, p. 4; ENA, *Submission on Issues Paper*, pp. 24-25; Energex, *Submission on Issues Paper*, p. 6; Ergon Energy, *Submission on Issues Paper*, pp. 7-8; Jemena, *Submission on Issues Paper*, p. 5; PIAC, *Submission on Issues Paper*, p. 24; and SP AusNet, *Submission on Issues Paper*, p. 5.

65 CitiPower et al, *Submission on Issues Paper*, pp. 6-7.

66 Grid Australia, SP AusNet, *Submission on Issues Paper*, p. 19.

67 Energex, *Submission on Issues Paper*, p. 6; Ergon Energy, *Submission on Issues Paper*, pp. 7-8; SP AusNet, *Submission on Issues Paper*, p. 5.

lead NSPs to substitute between assets of different asset lives to the extent that these are substitutable.

In the event that a NSP is not subject to a CESS, there may be a case for using actual depreciation to strengthen the incentives for efficient capex. In addition, if we believe that the incentives provided through the CESS are not leading to efficient capex outcomes, there could be a case for using actual depreciation. Evidence of persistent overspending and/or capex inefficiency could be used to assess whether the incentives are sufficient.

Hence, there remain two circumstances in which we would consider applying actual depreciation:

- where a CESS does not apply, or
- where the NSP has persistently overspent on capex or persistently incurred inefficient capex.

In deciding whether to apply actual depreciation in these circumstances we will consider:

- the substitutability between opex and capex and the balance of incentives between opex and capex
- the balance of incentives with service
- the substitutability of assets of different asset lives.

We consider that this approach meets the necessary requirements of the NER, outlined above.

# 4 Ex post measures

This chapter considers our process for implementing the new ex post measures for incentivising efficient capex. These include:

- the AER's process for making a statement on the efficiency of capex being rolled into the RAB
- the AER's process for determining whether to exclude from the RAB:
  - inefficient capex overspends
  - inefficient related party margins
  - opex that has been capitalised due to a change in a NSP's capitalisation policy.

## 4.1 Issue

Clauses 6.12.2(b) and 6A.14.2(b) of the NER require the AER to make a statement (as part of any draft and final determination decision) on whether the roll forward of the RAB meets the capital expenditure incentive objective (see appendix B). The relevant period for this statement is the regulatory control period.

Clauses S6.2.2A and S6A.2.2A of the NER provide that the AER may exclude capex from being rolled into the RAB in certain circumstances:

- where a NSP has spent more than its capex allowance[68], the AER may exclude inefficient capex overspends from being included in the RAB
- where a NSP has paid a margin to a related party, the AER may exclude any inflated portion of the margin from entering the RAB
- where a NSP's capex includes expenditure that was classified as opex at the time of the determination, the AER may exclude this from the RAB.

The relevant period for such exclusions is the first three years of the regulatory control period just ending and the last two years of the preceding regulatory control period.

In our issues paper we proposed a staged approach to assessing a NSP's capex efficiency ex post. This could be used to inform the statement of efficiency and any ex post exclusion of inefficient capex from the RAB. We noted that while ex post measures can be effective, our preference was to use ex ante measures as the primary means of driving efficient capex. The issues paper also outlined a proposed approach for assessing related party margins and capitalisation of opex.

## 4.2 Proposed approach

Our draft decision is to apply a two staged process to assess the efficiency of capex (figure 3):

The first stage would consider a number of factors including:

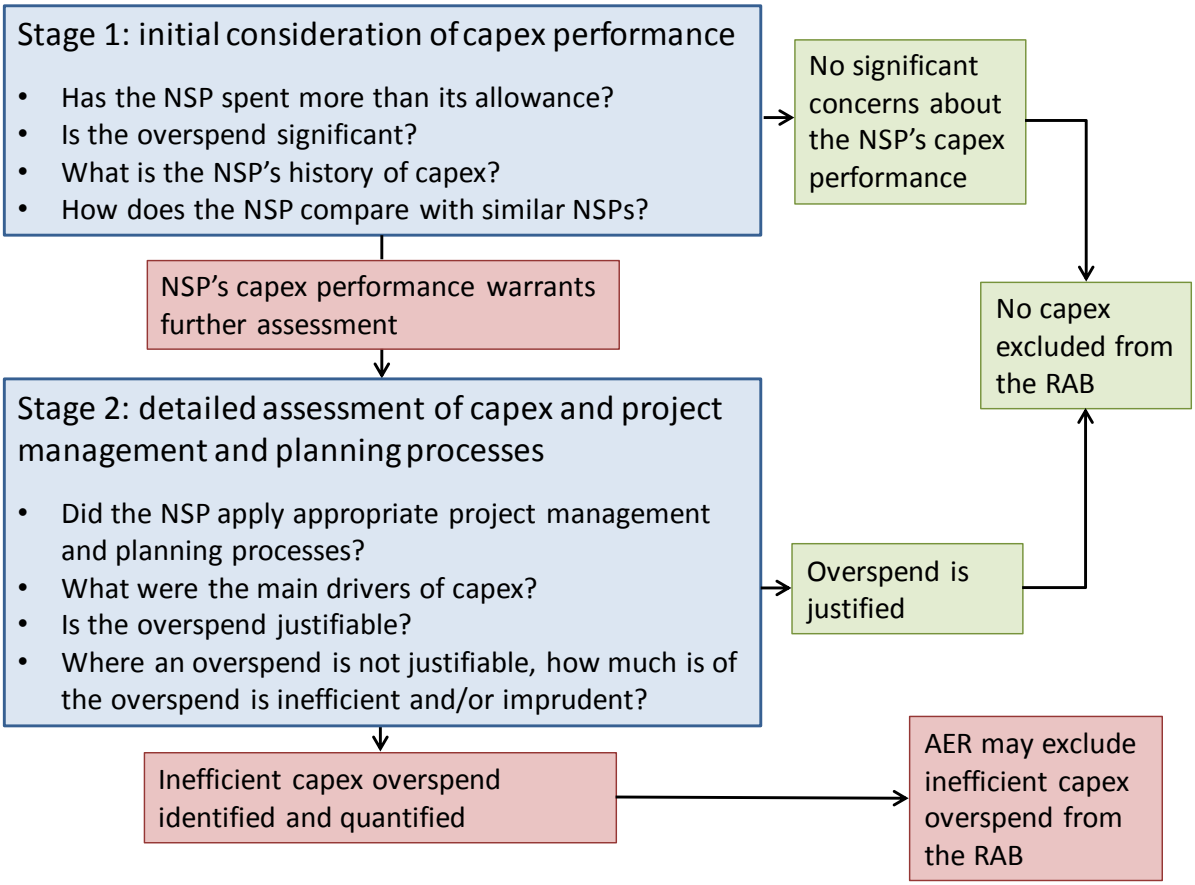
- whether the NSP had overspent over the period

[68] Plus (or minus) any adjustments provided under the reopening provisions, as a pass through or as a contingent project.

- the significance of any overspend
- the NSP's capex history
- how the NSP had performed relative to similar NSPs.

The second stage would consider the NSP's processes for project management alongside a detailed review of the NSP's capex.

**Figure 3 Staged process for ex post review**



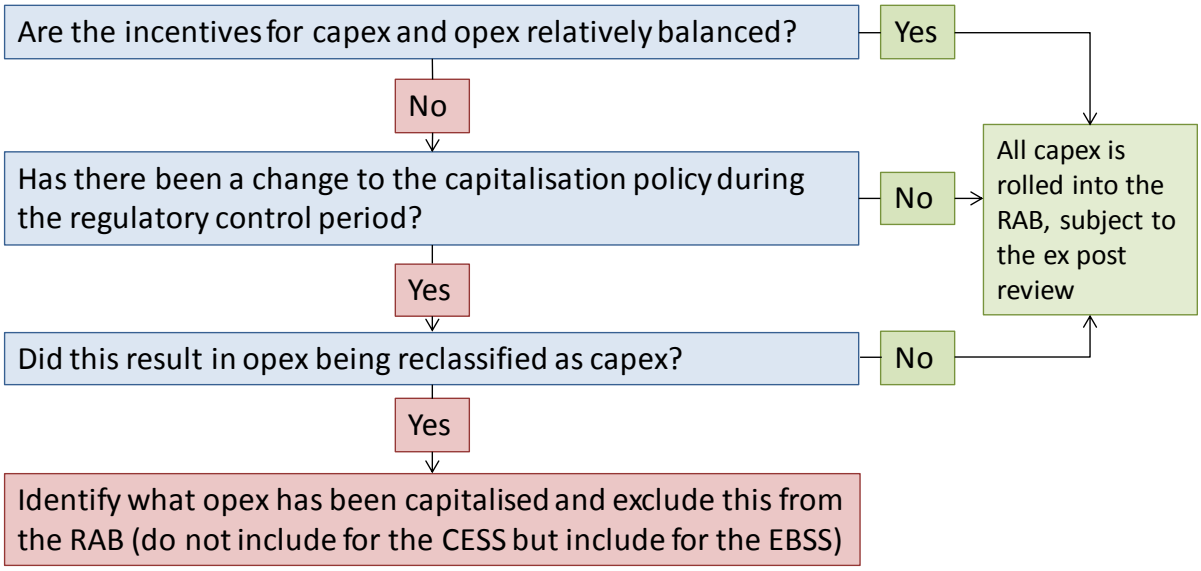

The intention is that this process would be used to inform both the AER's decision on whether to exclude inefficient overspends from the RAB and the AER's statement on the efficiency of capex being included in the RAB. In respect of any decision to exclude inefficient capex overspends from the RAB, the AER can 'only take into account information and analysis that the NSP could reasonably be expected to have considered or undertaken at the time that it undertook the relevant capital expenditure'.[69]

As part of a determination we would also consider whether we need to adjust the RAB for any changes to a NSP's capitalisation policy. Firstly we will consider whether the NSP is subject to a CESS and EBSS that provide relatively balanced incentives for capex and opex. If so, no adjustments need be made to the RAB. The NSP's actual capex would be included in the RAB, subject to it passing the ex post review. Where incentives are not balanced we will consider whether the NSP changed its capitalisation policy during the period, whether this resulted in opex being treated as

[69] Clauses S6.2.2A(h) and S6A.2.2A(h) of the NER.

capex and if so, whether this should be excluded from the RAB. The process for this is outlined in figure 4.

**Figure 4 Process for assessing capitalisation policy changes**




Related party margins would also be assessed to ensure inflated margins are not included in the RAB. If contract arrangements have not changed since the determination, the AER's approved margin would be rolled into the RAB. If arrangements had changed we would have to reconsider the margin using the same process currently used during a determination. This involves a consideration of whether there was an incentive to agree to an inflated margin. If so, the AER would consider whether a competitive tender was held to award the contract. If the NSP had no incentive to agree to an inflated margin or if a competitive tender was used to award the contract, the full contract charge would be included in the RAB. If neither of these conditions held, the AER would only allow the contractor's actual costs to be rolled into the RAB. A 'margin' would only be permitted where the service provider could establish the efficiency and prudency of such a margin.[70] The process for this is outlined in figure 5.

These two processes are detailed in chapter 5 of our draft guidelines.

Where we choose not to include capex in the RAB, we will make a corresponding adjustment to the CESS so that NSPs do not incur a 'double penalty'.

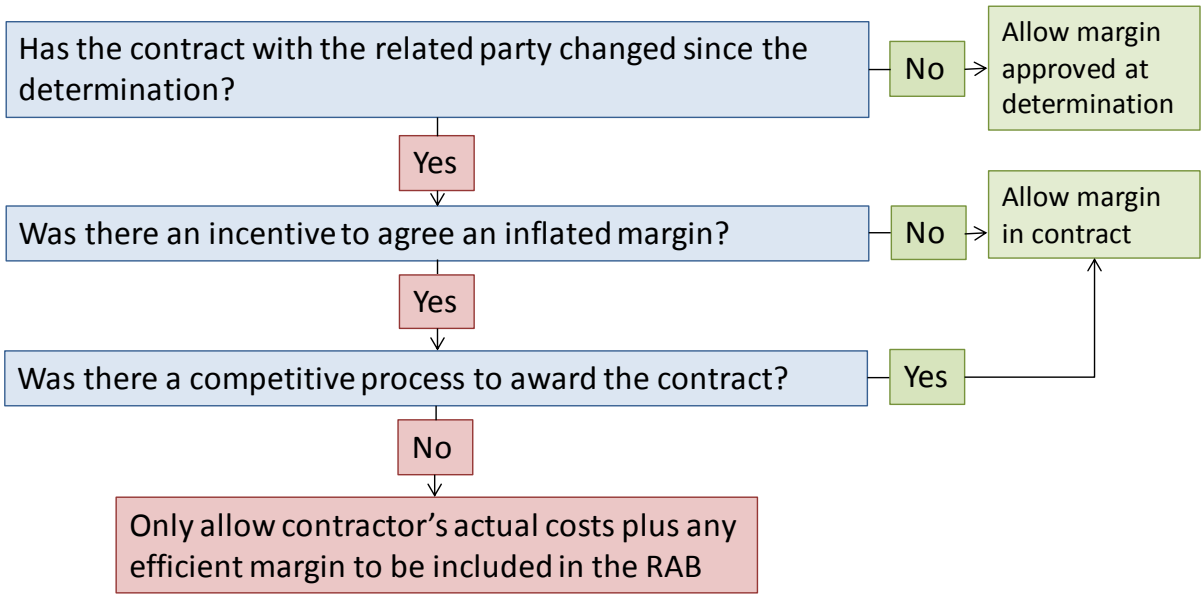
For years 1, 2 and 3, the ex post review and the CESS will be calculated at the same time (at the end of the relevant regulatory control period). An example of this is outlined in appendix C (and in section 3.5 of the guidelines).

For years 4 and 5, the ex post review will be undertaken later, at the end of the next regulatory control period (so, for a five year regulatory period, five years later). In this case the CESS will have already have been calculated and the RAB rolled forward at the end of the relevant regulatory control period (i.e. at the end of year 5). The CESS and the RAB may need to be amended for actual capex and the outcomes of the ex post review at the end of the following regulatory control period (i.e. five years

[70] This could be to compensate for common costs, provide a return on, and of, physical and intangible assets by the contractor in the provision of the service, or to compensate for asymmetric risks.

later). The process for achieving this is outlined in section 3.5 of the guidelines. An example is also provided in appendix C.

**Figure 5 Process for assessing related party margins**




## 4.3 Reasons for the proposed approach

There are three main elements to our ex post measures:

- our ex post review, to inform our efficiency statement and the exclusion of inefficient capex overspends from the RAB
- our ex post assessment of changes to a NSP's capitalisation policy
- our ex post assessment of related party margins.

The reasons for our proposed approach are discussed below.

### 4.3.1 Ex post review

PIAC, the Council of Small Business Australia (COSBOA) and ActewAGL supported our position in the issues paper that ex post measures should be secondary to ex ante measures in incentivising efficient capex.[71] However, MEU disagreed with this position, stating instead that the ex post measures should be used in preference to any CESS.[72] Aurora also preferred ex post measures above ex ante measures.[73]

Grid Australia noted that ex post exclusions should only apply in extreme circumstances.[74] Energex suggested that any ex post exclusions should only apply where there is a cumulative overspend over the period rather than for an overspend in any single year of the regulatory control period.[75] We note

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71 ActewAGL, *Submission on Issues Paper*, p. 3; COSBOA, *Submission on Issues Paper*, p. 7; Grid Australia, *Submission on Issues Paper*, p. 22; PIAC, *Submission on Issues Paper*, p. 27.
72 MEU, *Submission on Issues Paper*, p. 19.
73 Aurora, *Submission on Issues Paper*, p. 4.
74 Grid Australia, *Submission on Issues Paper*, pp. 22-24.
75 Energex, *Submission on Issues Paper*, p. 9.

that under clauses S6.2.2A(c) and S6A.2.2A(c) we can only exclude capex from the RAB if the NSP has overspent in total over the relevant period.

The CESS we have recommended is less high powered in respect of overspends than that we were considering in the issues paper. For this reason the CESS in isolation might provide less protection for customers against inefficient overspends. Given this, the role of the ex post review will potentially be greater than what we foresaw when drafting the issues paper. That said, the existence of the CESS and the threat of the ex post review should provide NSPs with an incentive to be more efficient and prudent in their capex. This should limit our need to progress the ex post review and our need to exclude inefficient capex overspends from the RAB.

While our staged approach to the ex post review was supported by the ENA, NSW DNSPs, PIAC, Grid Australia and SP AusNet[76], we have made a number of changes to the position outlined in the issues paper. This has resulted in the two staged approach detailed above. Reasons for these changes include:

- Removal of consideration of service standards from stage 1: we have reassessed the need to assess service standards as part of the ex post review. We initially included this to allow us to assess whether underspends were from NSPs deferring capex (to the detriment of service) rather than from efficiency improvements. This is of particular concern if the CESS increases the incentive to underspend.[77] Upon reflection we are not convinced the ex post review is the right mechanism for assessing this. NSPs already have incentives to improve service through the STPIS. Further, if we are concerned about capex deferral between periods, this is better addressed when we set the capex allowance for the following period.[78] Hence, we have removed service standards from stage 1 of the ex post review. However, we may consider indicators of service performance as part of our detailed review of capex in stage 2.

- Removal of the stage considering incentives for efficient capex: We have removed the former stage 2 which considered what incentives the NSP is subject to and whether the NSP responds to those incentives. This is for two reasons. Firstly, we are recommending that all NSPs should be subject to the same symmetric CESS, meaning the same incentives should apply to all NSPs. Secondly, it is difficult to conclude whether a NSP has responded to its incentives. An underspend could indicate responsiveness to incentives or a generous forecast. Hence, we believe that this stage would have added little benefit to the ex post process.

- Combining the consideration of a NSP's planning and management processes with the detailed assessment of the NSP's capex: We have combined the former stages 3 and 4. Upon further consideration we are not convinced that evidence of appropriate processes and plans alone would lead us to stop our ex post assessment in all circumstances. Indeed, EnerNOC noted concern that we might not consider the efficiency of an overspend if we find that the NSP had the appropriate processes and plans in place.[79] In addition, we think it is difficult to assess whether a NSP has followed the appropriate plans, processes and procedures without undertaking a more detailed assessment of individual projects. Hence, under our new process we will consider a NSP's management and planning processes alongside our more detailed review of its capex projects in stage 2.

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[76] ENA, *Submission on Issues Paper* , pp. 14-15; Grid Australia, *Submission on Issues Paper*, p. 22; NSW DNSPs, *Submission on Issues Paper* , p. 3; PIAC, *Submission on Issues Paper*, p. 27, SP AusNet, *Submission on Issues Paper*, p. 8.

[77] A concern raised by DSDBI. See DSDBI, *Submission on Issues Paper*, pp. 1-2.

[78] AER, *Draft Expenditure Forecasting Assessment Guidelines*, August 2013.

[79] EnerNOC, *Submission on Issues Paper*, p. 5.

In respect of stage 1, ENA and CitiPower, Powercor and SA Power Networks requested further guidance on our interpretation of a 'significant' overspend where we are deciding whether to progress our assessment.[80] Firstly, the significance of any overspend is only one of the factors that we will consider in deciding whether to progress our ex post review from stage 1 to stage 2. Secondly, we have concerns about the potential for perverse outcomes if we included a specific threshold in the guidelines. While a threshold could provide greater transparency and consistency in assessing different NSPs' capex overspends, it could create a new 'target' for NSPs to overspend by. There may also be perverse outcomes if we cannot undertake a detailed review of inefficient overspends below the threshold, or if our threshold requires us to do a detailed review of all overspends above the threshold. It is also difficult to derive and justify an appropriate threshold that works for all NSPs. For these reasons, we do not consider it is appropriate to specify a particular threshold.

A number of stakeholders also stated that the guidelines should bind us to only considering information available at the time the NSP made the decision to undertake capex.[81] We note this is already required under the NER. Clauses S6.2.2A(h) and S6A.2.2A(h) of the NER state the AER can 'only take into account information and analysis that the NSP could reasonably be expected to have considered or undertaken at the time that it undertook the relevant capital expenditure'.

In relation to stage 2, Grid Australia noted that it would be inappropriate to extrapolate from the outcomes of an assessment of a limited number of projects to a wider range of projects.[82] We do not support Grid Australia's position. To the extent that a NSP's unit costs, for example, are inflated, an adjustment could be made to a number of projects. Similarly, if systematic problems are exposed in a NSP's asset management processes, for example, this could have led to widespread inefficiencies in all areas of asset management. Hence, we consider it appropriate to retain discretion on how we determine how much of a NSP's overspend is inefficient.

A number of NSPs also requested guidance on how the AER would deal with excluded capex that later becomes efficient.[83] In practice this is challenging as we cannot include in the RAB capex we disallowed in a previous ex post review, even if we find it has become efficient at some later time. The previous RAB must be increased by the amount of all capex incurred during the previous control period (except for exclusions discussed in this chapter).[84] If we exclude capex from a previous RAB roll forward we cannot add that capex to the RAB in a subsequent period because that capex was not incurred during the immediately preceding period. That said, when assessing the amount of capex to exclude from the RAB, we may take into account (among other things) the extent to which that capex may become efficient in the future. In assessing whether to include a capex overspend in the RAB, our overarching consideration is whether the capex complies with the capital expenditure criteria.

CitiPower, Powercor and SA Power Networks requested guidance on when NSPs would be involved in the review process.[85] Our position is that NSPs will be involved in each stage of the process. In particular, it is expected that NSPs will provide information to the AER to support any claim that an overspend was justified and/or efficient.

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80 CitiPower et al, *Submission on Issues Paper*, p. 9; ENA, *Submission on Issues Paper*, p. 14.

81 ActewAGL, *Submission on Issues Paper*, p. 3; CitiPower et al, *Submission on Issues Paper*, p. 10; DSDBI, *Submission on Issues Paper*, p. 6; ENA, *Submission on Issues Paper*, p. 14; Ergon Energy, *Submission on Issues Paper*, p. 10.

82 Grid Australia, *Submission on Issues Paper*, p. 24.

83 ENA, *Submission on Issues Paper*, p. 14; CitiPower et al, *Submission on Issues Paper*, p. 10; Grid Australia, *Submission on Issues Paper*, p. 26.

84 There are two exceptions to this outlined in clauses S6.2.1(e)(8) and S6A.2.1(f)(8) but these are unlikely to be relevant where previously excluded capex later becomes efficient.

85 CitiPower et al, *Submission on Issues Paper*, p. 9.

### 4.3.2 Capitalisation policy changes

In assessing whether opex has been capitalised as a result of a change to a NSP's capitalisation policy we are proposing to maintain the general approach outlined in the issues paper. This approach was supported by Ergon Energy, Energex and ENA.[86]

The only factor we have changed is an additional first step to consider whether the incentives for opex and capex are relatively balanced. That is, whether the penalty under the CESS is approximately equal to the reward under the EBSS. To the extent that these are balanced, the EBSS reward for underspending on opex will be offset by the CESS penalty for overspending on capex. Hence, there is no need to account for any changes in a NSP's capitalisation policy where the incentives for capex and opex are balanced. In this scenario we will simply roll into the RAB whatever the NSP has classified as capex at the time of the roll forward, subject to this meeting the requirements under the ex post review.

Where the incentives for capex and opex differ, the problem of opex being capitalised is only relevant if a NSP's capitalisation policy has changed and opex has been reclassified as capex due to those changes. Hence, to the extent that a NSP has different incentives for capex and opex, we will require information from the NSP on whether its capitalisation policy has changed, and the implications of this, as part of the regulatory determination process. Where we identify that opex has been capitalised as a result of a change to a NSP's capitalisation policy, the corresponding expenditure will be excluded from the RAB (and the CESS calculation). For the purposes of calculating the payment due under the opex EBSS, this expenditure will count as opex.

In summary, we will only make an adjustment to the RAB to account for capitalised opex where:

- the incentives for capex and opex are not balanced (i.e. the penalty under the CESS is not approximately equal to the reward under the EBSS), and
- opex has been capitalised as a result of a change in the NSP's capitalisation policy during the regulatory control period.

Where we make such an adjustment to the RAB we will make a corresponding adjustment to the CESS and the EBSS.

In all other circumstances the NSP's RAB will be rolled forward for actual capex, subject to this meeting the requirements of the ex post review.

We note that a couple of stakeholders commented on the standardisation of capitalisation policies.[87] This issue is for the Expenditure Forecasting Assessment Guidelines rather than for these guidelines.

### 4.3.3 Related party margins

The assessment of related party margins is only relevant where a NSP is provided services from a related party[88] and where there is a margin included in the contract.

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86 ENA, *Submission on Issues Paper*, p. 33; Energex, *Submission on Issues Paper*, p. 12; Ergon Energy, *Submission on Issues Paper*, p. 11.

87 Grid Australia and Ergon Energy did not support standardisation while MEU did support standardisation. See Ergon Energy, *Submission on Issues Paper*, p. 11; Grid Australia, *Submission on Issues Paper*, p. 26; MEU, *Submission on Issues Paper*, pp. 33-34.

88 That is, a party that is related to the NSP in that there is common ownership of the two companies.

We have maintained the approach to assessing related party margins that was outlined in the issues paper. This approach is largely the same as the approach applied ex ante as part of a revenue determination process. This approach was supported by Grid Australia and Energex.[89]

ENA requested details of how the CESS will be adjusted for a margin that is not included in the RAB. We can confirm that any exclusion from the RAB (either an inefficient overspend, an inflated portion of a related party margin or capitalised opex) will be excluded from the NSP's capex for the purposes of calculating the CESS. Section 3.5 of the guidelines outlines the method for achieving this.

[89] Only MEU disagreed with our proposed approach stating instead that the guidelines should refer to process followed at the time of the revenue determination. Since we are following the same approach as that applied at the determination, we hope this addresses MEU's concerns. See MEU, *Submission on Issues Paper*, p. 33.

# A Transitional arrangements for the guidelines

This appendix outlines how the guidelines will apply over the various transitional periods.[90]

## Transitional groups

The AEMC has grouped NSPs and transitional arrangements based on when the AER will consider their proposals. In summary:

- SP AusNet (transmission), which is due to commence its next regulatory control period on 1 April 2014, will be subject to the old Chapter 6A rules for three years before moving to the new rules on 1 April 2017.
- 2014 group: NSPs with their next regulatory period commencing on 1 July 2014 (TNSPs in NSW and Tasmania and DNSPs in NSW and ACT)[91] will have a one year placeholder determination with a determination for years 2 to 5 to be undertaken during that first year with a true-up.[92]
- Directlink, which is due to commence its next regulatory period on 1 July 2014, will have a shorter determination process (11 months instead of 15). Directlink is not subject to transitional arrangements because of its relatively small size.
- 2015-16 group: NSPs with their next regulatory period commencing on 1 July 2015 or 1 January 2016 (DNSPs in Queensland, South Australia and Victoria) will be subject to a preliminary determination with a mandatory re-opener.
    - We will make a placeholder determination two months before the start of the period (equivalent to a draft determination) which will then actually apply for the first four months of the period.[93]
    - We will revoke the preliminary determination no later than four months into the first regulatory year of the period, and replace it with a substitute determination (equivalent to a final determination) with an adjustment mechanism to account for differences between the preliminary and substitute determinations.
- Post 2016 there will be no transitional arrangements. This applies to Tasmanian DNSPs, TNSPs in Queensland and South Australia and Murraylink.

## Application of the Capital Expenditure Sharing Scheme

For the 2014 group, the CESS will not operate in the transitional period (1 July 2014 to 30 June 2015) as it has not been applied before. The CESS may commence for years 2 to 5. We must set out how the CESS will apply in years 2 to 5 in our Framework and Approach (F&A) stage 2 paper. We will publish this by 31 January 2014.

For the 2015-16 group, the CESS may apply normally over the period. We must set out our proposed application of incentive schemes in the F&A stage. Where relevant, we may apply schemes differently in year one.

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90 NER, transitional rules, chapter 11.

91 ActewAGL will submit its next gas access arrangement 1 year later to avoid overlap with the delayed electricity process.

92 The true up will account for differences between the placeholder revenue for the transitional year and the revenue requirement for the transitional year established in the full determination.

93 The preliminary determination will apply to DNSP pricing proposals for the first year of the regulatory period.

For all subsequent determinations the CESS may apply normally over the period.

## Depreciation approach

For the 2014 group, the use of actual or forecast depreciation to calculate the opening value of the RAB at the start of the transitional period and subsequent period will be as set out in the current regulatory determination for the relevant business. This is because the incentive power in the current regulatory control period relies on the type of depreciation used to roll forward the RAB at the end of that period (the opening RAB for the next period). We can determine the depreciation method used to roll forward the RAB at the end of the subsequent regulatory period when we make the subsequent regulatory determination. Hence, we can decide on the form of depreciation at the same time that we decide whether to apply the CESS for the first time. We must set out the method we intend to use in the F&A stage.

For the 2015-16 group, we have discretion to decide whether to use actual or forecast depreciation to establish the opening value of the RAB for the following regulatory period. This will also be the case for subsequent determinations.

## Ex post review

For the 2014 group, we cannot exclude from the RAB any inefficient capex overspend incurred during or before the transitional period.[94] That is, ex post exclusions from the RAB for inefficient capex overspends can only be in relation to capex incurred after 30 June 2015. The AEMC's reason for this was because these NSPs will not know what their capex allowance is for the transitional period (1 July 2014 to 30 June 2015) until towards the end of the period.

Hence, the first full ex post capex review for the 2014 group will be undertaken at the time we undertake the regulatory determination for the regulatory control period commencing 1 July 2019 (assuming a five year regulatory control period). At this time, capex will be reviewed for the period 1 July 2015 to 30 June 2017.

For related party margins and capitalised opex, we cannot exclude from the RAB any capex incurred in a regulatory year commencing before we publish the guidelines for the 2014 group.[95] That is, this assessment will only consider capex in regulatory years following 29 November 2013.

For the 2015-16 group, we can only exclude from the RAB capex incurred in regulatory years following our publication of the guidelines (where there is an inefficient overspend, inflated margin or capitalised opex).[96] That is, we can only consider capex in regulatory years following 29 November 2013. Assuming a five year regulatory control period, the first ex post review for this group will be undertaken before the commencement of the 2020-21 regulatory control period. At this time capex from 30 November 2013 until mid or late 2018 will be reviewed (depending on the NSP).

For all subsequent determinations, we may exclude from the RAB capex incurred any time after we have released our guidelines (where there is an inefficient overspend, inflated margin or capitalised opex).[97]

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94 Clauses 11.56.5 and 11.58.5 of the NER.
95 Clauses 11.56.5 and 11.58.5 of the NER.
96 Clause 11.60.5 of the NER.
97 Clause 11.62 of the NER.

# B Relevant parts of the rules

This appendix provides a summary of relevant terms and definitions.

## Capital expenditure incentive guidelines

The required content of the Capital Expenditure Incentive Guidelines is prescribed in clauses 6.4A and 6A.5A of the NER:

> (b) The AER must, in accordance with the distribution consultation procedures, make and publish guidelines (*capital expenditure incentive guidelines*) that set out:
>
> (1) any capital expenditure sharing schemes developed by the AER in accordance with clause 6.5.8A, and how the AER has taken into account the capital expenditure sharing scheme principles in developing those schemes;
>
> (2) the manner in which it proposes to make determinations under clause S6.2.2A(a) if the overspending requirement is satisfied;
>
> (3) the manner in which it proposes to determine whether depreciation for establishing a regulatory asset base as at the commencement of a regulatory control period is to be based on actual or forecast capital expenditure;
>
> (4) the manner in which it proposes to make determinations under clause S6.2.2A(i) if the margin requirement is satisfied; and
>
> (5) the manner in which it proposes to make determinations under clause S6.2.2A(j) if the capitalisation requirement is satisfied; and
>
> (6) how each scheme and proposal referred to in subparagraphs (1) to (5), and all of them taken together, are consistent with the capital expenditure incentive objective. (c) If the *AER* is not satisfied as referred to in paragraph (c), it must not accept the forecast of required capital expenditure of a *Transmission Network Service Provider [DNSP]*.
>
> (c) There must be Capital Expenditure Incentive Guidelines in force at all times after the date on which the AER first publishes the Capital Expenditure Incentive Guidelines under these Rules.

## Capital expenditure incentive objective

The capital expenditure incentive objective is given by clauses 6.4A(a) and 6A.5A(a) of the NER:

> The *capital expenditure incentive objective* is to ensure that, where the value of a regulatory asset base is subject to adjustment in accordance with the *Rules*, then the only capital expenditure that is included in an adjustment that increases the value of that regulatory asset base is capital expenditure that reasonably reflects the *capital expenditure criteria*.

## Capital expenditure criteria

The capital expenditure criteria are contained in clauses 6A.6.7(c) and 6.5.7(c) of the NER:

> (c) The AER must accept the forecast of required capital expenditure of a *Transmission Network Service Provider [DNSP]* that is included in a *Revenue Proposal [building block proposal]* if the *AER* is satisfied that the total of the forecast capital expenditure for the *regulatory control period* reasonably reflects each of the following (the *capital expenditure criteria*):
>
> (1) the efficient costs of achieving the capital expenditure objectives;
>
> (2) the costs that a prudent operator would require to achieve the *capital expenditure objectives*; and
>
> (3) a realistic expectation of the demand forecast and cost inputs required to achieve the *capital expenditure objectives*.

(d) If the *AER* is not satisfied as referred to in paragraph (c), it must not accept the forecast of required capital expenditure of a *Transmission Network Service Provider [DNSP]*.

## Capital expenditure objectives

The capital expenditure objectives are contained in clauses in 6.5.7(a) and 6A.6.7(a) of the NER:

(a) A building block proposal must include the total forecast capital expenditure for the relevant regulatory control period which the Distribution Network Service Provider [TNSP] considers is required in order to achieve each of the following (the *capital expenditure objectives*):

(1) meet or manage the expected demand for standard control services over that period;

(2) comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;

(3) maintain the quality, reliability and security of supply of standard control services; and

(4) maintain the reliability, safety and security of the distribution system through the supply of standard control services.

## Capital expenditure factors

The capital expenditure factors are contained in clauses 6.5.7(e) and 6A.6.7(e) of the NER:

(4) the most recent annual benchmarking report that has been published under clause 6A.31 and benchmark capital expenditure that would be incurred by an efficient *Transmission Network Service Provider [DNSP]* over the relevant *regulatory control period*;

(5) the actual and expected capital expenditure of the *Transmission Network Service Provider [DNSP]* during any preceding *regulatory control periods*;

(5A) the extent to which the capital expenditure forecast includes expenditure to address the concerns of electricity consumers as identified by the *Transmission Network Service Provider [DNSP]* in the course of its engagement with electricity consumers;

(6) the relative prices of operating and capital inputs;

(7) the substitution possibilities between operating and capital expenditure;

(8) whether the capital expenditure forecast is consistent with any incentive scheme or schemes that apply to the *Transmission Network Service Provider [DNSP]* under clauses 6A.6.5A, 6A.7.4 or 6A.7.5 [6.5.8A or 6.6.2 to 6.6.4];

(9) the extent to which the capital expenditure forecast is referable to arrangements with a person other than the *Transmission Network Service Provider [DNSP]* that, in the opinion of the *AER*, do not reflect arm's length terms;

(10) [9A] whether the capital expenditure forecast includes an amount relating to a project that should more appropriately be included as a *contingent project* under clause 6A.8.1(b) [6.6A.1(b)];

(11) the most recent NTNDP[98], and any submissions made by *AEMO*, in accordance with the *Rules*, on the forecast of the *Transmission Network Service Provider's* required capital expenditure; [does not apply for DNSPs]

(12) [10] the extent to which the *Transmission Network Service Provider [DNSP]* has considered and made provision for efficient and prudent non-*network* alternatives;

(13) any relevant *project assessment conclusions report* required under clause 5.6.6; and [does not apply for DNSPs]

[98] National Transmission Network Development Plan.

(14) [12] any other factor the *AER* considers relevant and which the *AER* has notified the *Transmission Network Service Provider [DNSP]* in writing, prior to the submission of its revised *Revenue Proposal [regulatory proposal]* under clause 6A.12.3 [6.10.3], is a *capital expenditure factor*.

## Capital expenditure sharing scheme principles

The capital expenditure sharing scheme principles are contained in clauses 6A.6.5A and 6.5.8A of the NER:

(c) In developing a *capital expenditure sharing scheme*, the AER must take into account the following principles (the *capital expenditure sharing scheme principles*):

(1) *Transmission Network Service Providers [DNSPs]* should be rewarded or penalised for improvements or declines in efficiency of capital expenditure; and

(2) the rewards and penalties should be commensurate with the efficiencies or inefficiencies in capital expenditure, but a reward for efficient capital expenditure need not correspond in amount to a penalty for the same amount of inefficient capital expenditure.

## Actual or forecast depreciation

The principles guiding the decision on whether to use depreciation based on actual or forecast capex are contained in clauses S6A.2.2B and S6.2.2B of the NER:

(b) The decision referred to in paragraph (a) must be consistent with the capital expenditure incentive objective.

(c) In making the decision referred to in paragraph (a), the AER must have regard to:

(1) the incentives that the Distribution Network Service Provider has in relation to undertaking efficient capital expenditure, including as a result of the application of any incentive scheme or any other incentives under the Rules;

(2) the substitution possibilities between assets with relatively short economic lives and assets with relatively long economic lives and the relative benefits of such asset types;

(3) the extent to which any capital expenditure incurred by the Distribution Network Service Provider has exceeded the corresponding amount of forecast capital expenditure accepted or substituted by the AER and the amount of that excess expenditure which is not efficient;

(4) the Capital Expenditure Incentive Guidelines; and

(5) the capital expenditure factors.

## Overspending requirement

The overspending requirement is set out in clauses S6.2.2A(c) and S6A.2.2A(c) of the NER:

(c) The overspending requirement is satisfied where the sum of all capital expenditure incurred during the review period exceeds the sum of:

(1) the forecast capital expenditure accepted or substituted by the AER for the review period as such forecast capital expenditure has been adjusted in accordance with clauses 6.6.5(f) and 6.6A.2(h); and

(2) any capital expenditure that is recovered by way of such part of an approved pass through amount as is permitted to be passed through to Distribution Network Users during the review period less any capital expenditure that is included in a negative pass through amount that is required to be passed through to Distribution Network Users during the review period.

## Margin requirement

The margin requirement is set out in clauses S6.2.2A(d) and S6A.2.2A(d) of the NER:

> (d) The margin requirement is satisfied where the amount of the capital expenditure as a result of which the previous value of the regulatory asset base would otherwise be increased in accordance with clause S6.2.1(e) includes capital expenditure that represents a margin paid by the Distribution Network Service Provider in circumstances where the margin is referable to arrangements that, in the opinion of the AER, do not reflect arm's length terms.

## Capitalisation requirement

The capitalisation requirement is set out in clauses S6.2.2A(e) and S6A.2.2A(e) of the NER:

> (e) The capitalisation requirement is satisfied where the amount of the capital expenditure as a result of which the previous value of the regulatory asset base would otherwise be increased in accordance with clause S6.2.1(e) includes expenditure that, under the Distribution Network Service Provider's applicable capitalisation policy submitted to the AER as part of a regulatory proposal, should have been treated as operating expenditure.

# C Example of how the CESS works alongside an ex post exclusion

These examples show how the CESS is calculated where an amount of capex is not included in the RAB as a result of the ex post review. Example C.1 shows how the adjustment will be made in the case of an exclusion from year 3 of the regulatory control period (i.e. where the CESS and the ex post exclusion occur in the same period). Example C.2 shows how the adjustment will be made for an adjustment in year 4 (i.e. where there is a lag between the CESS and the ex post exclusion).

These examples can also be found in the sheets named 'ES - appendix C(1)' and 'ES - appendix C(2)' in the CESS excel model that was released for consultation alongside this explanatory statement.[99]

## Example C.1 Ex post exclusion from year 3 of the regulatory control period

Consider example 2 in section 2.3.6 (a $20 million overspend in year 3). Now, consider that in undertaking our ex post review we find that $10 million of the overspend in year 3 was inefficient and decide not to roll this amount into the RAB. The NSP will bear the full costs of this as it has not yet been funded and it will not be included in the RAB. We will need to calculate the CESS differently to ensure we don't also penalise the NSP through the CESS.

We do this by excluding the inefficient $10 million from the CESS calculation. We subtract $10 million from the original $120 million of actual capex in year 3. This gives actual capex of $110 in year 3 and the rest of the calculations are made on the basis of this updated figure. Tables 8 and 9 show the recalculation of the CESS. The previous values from example 2 are shown in parenthesis for reference. However, in practice, the CESS would only be calculated once for this example (after the ex post exclusion is taken out) since the results of the ex post review will already be known for year 3.

**Table 8 Example with a $15 million ex post exclusion in year 3 ($ million)**

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Capex allowance | 100 | 100 | 100 | 100 | 100 |
| Actual capex | 100 | 100 | 110<br>(120) | 100 | 100 |
| Overspend | 0 | 0 | 10<br>(20) | 0 | 0 |
| Year 3 financing cost | 0 | 0 | 0.30<br>(0.59) | 0.60<br>(1.20) | 0.60<br>(1.20) |
| Discount rate (mid-year) | 1.30 | 1.23 | 1.16 | 1.09 | 1.03 |
| NPV overspend | 0 | 0 | 11.57<br>(23.14) | 0 | 0 |
| Discount rate (end of year) | 1.26 | 1.19 | 1.12 | 1.06 | 1.00 |
| NPV annual cost of overspend | 0 | 0 | 0.33<br>(0.66) | 0.64<br>(1.27) | 0.60<br>(1.20) |

[99] Available on our website: http://www.aer.gov.au/node/18869.

Table 9 shows the CESS calculations. In particular:

- The NPV of the total overspend is the NPV of the overspend in year 3 ($11.57 million).
- The NSP share of this is calculated by multiplying this by 30 per cent ($11.57 million x 30 per cent = $3.47 million).
- The financing benefit already accrued is calculated by summing the annual cost of the overspend for each year in NPV terms ($0.33 million + $0.64 million + $0.60 million = $1.57 million).
- The CESS payment is given by subtracting the NPV financing costs already borne, from the NSP's share of the overspend ($3.47 million - $1.57 million = $1.90 million).

**Table 9 CESS calculations**

| | This example | Example 1 |
|---|---|---|
| Total NPV overspend | $11.57 million | ($23.14 million) |
| NSP share of underspend | $3.47 million | ($6.94 million) |
| Financing benefit already accrued | $1.57 million | ($3.14 million) |
| CESS payment | $1.90 million | ($3.80 million) |

This gives a penalty of $1.90 million. This is lower than the CESS penalty calculated in example 2 ($3.80 million) since it does not include any penalty for the inefficient $10 million overspend. Instead the NSP is penalised through the $10 million not being included in the RAB.

The net difference between this example and example 2 is that the NSP bears the full cost of the inefficient overspend in this example, rather than the 30 per cent borne in example 2. Table 10 shows that the change in the NSP's financing benefit and the CESS is exactly equal to the NSP's share of the overspend (both are equal to $3.47 million). Hence, the net impact for the NSP is the $10 million overspend. Since this amount was not funded up front or through the RAB, consumers will bear none of the costs associated with this $10 million.

**Table 10 Net effect on NSP**

| | Calculation | Result |
|---|---|---|
| Impact on RAB | -$10 million | -$10 million |
| Difference in financing cost | $3.14 million - $1.57 million | $1.57 million |
| Difference in CESS penalty | $3.80 million - $1.90 million | $1.90 million |
| Net difference in financing benefit and CESS | $1.57 million + $1.90 million | $3.47 million |
| Difference in NSP's share of the overspend | $6.94 million - $3.47 million = 30 % x $11.57 million | $3.47 million |
| Net impact on NSP | -$10 million + $3.47 million - $3.47 million | -$10 million |

## Example C.2 Ex post exclusion from year 4 of the regulatory control period

There are two reasons why we might need to adjust the CESS in a following regulatory determination:

- Where the forecast amounts of capex in years 4 and 5 that were used to calculate the CESS differ from the actual amounts of capex incurred in years 4 or 5.
- Where we exclude capex from the RAB for an inefficient overspend in years 4 or 5.

These two events could occur individually or at the same time and will require an adjustment to the RAB and the CESS.

This example illustrates how we will adjust the CESS where there is an inefficient overspend in year 4 (though the CESS adjustment will be much the same whether the change is due to a difference between actual and forecast capex or due to an ex post exclusion). The adjustment to the RAB will occur as per our usual method for accounting for year 5 differences in the existing roll forward model.

In this example we decide as part of the ex post review to exclude $5 million of capex in year 4 of a regulatory control period from the RAB. Assume we have the pattern of expenditure shown in table 11. For simplicity, assume that no ex post adjustments were made in years 1, 2 and 3 for the first regulatory control period.

**Table 11 Capex over two periods ($ million)**

| | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Allowance | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Actual | 100 | 100 | 120 | 110 | 100 | 100 | 100 | 100 | 100 | 100 |
| Underspend | 0 | 0 | -20 | -10 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y1 benefit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Y2 benefit | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 |
| Y3 benefit | | | -0.59 | -1.20 | -1.20 | | | 0 | 0 | 0 |
| Y4 benefit | | | | -0.30 | -0.60 | | | | 0 | 0 |
| Y5 benefit | | | | | 0 | | | | | 0 |
| Total benefit | 0 | 0 | -0.59 | -1.50 | -1.80 | 0 | 0 | 0 | 0 | 0 |
| Discount (mid-year) | 1.30 | 1.23 | 1.16 | 1.09 | 1.03 | 0.97 | 0.92 | 0.86 | 0.82 | 0.77 |
| Discount (end year) | 1.26 | 1.19 | 1.12 | 1.06 | 1.00 | 0.94 | 0.89 | 0.84 | 0.79 | 0.75 |
| NPV underspend | 0 | 0 | -23.14 | -10.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| NPV benefit | 0 | 0 | -0.66 | -1.59 | -1.80 | 0 | 0 | 0 | 0 | 0 |

The CESS for both regulatory control periods would be calculated as usual. Since the NSP spent exactly its allowance in period 2, no CESS payment would apply in period 2. The CESS calculations for period 1 are shown in table 12.

**Table 12 CESS for period 1**

| | Calculation | Amount |
|---|---|---|
| Total overspend (NPV) | $23.41 million + $10.91 million | $34.05 million |
| NSP share | 30 per cent x $34.05 million | $10.21 million |
| Total financing cost (NPV) | $0.66 million + $1.59 million +$1.80 million | $4.05 million |
| CESS penalty | $10.21 million - $4.05 million | $6.17 million |

Assume when we undertake the ex post review at the end period 2, we find that the efficient amount of capex in year 4 should have been $105 million. Put differently, imagine we find that $5 million of the NSP's overspend is inefficient. We will then exclude $5 million from the RAB and make an adjustment to the RAB to account for the time value of money. We will also have to adjust the CESS for period 2. The new cash flows for this adjustment are in table 13. The exclusion can simply be counted as an additional underspend for the purposes of the CESS (which is why it is positive).

**Table 13 Ex post exclusions for years 4 and 5**

| | Y1 | Y2 | Y3 | Y4 | Y5 |
|---|---|---|---|---|---|
| Ex post exclusion | 0 | 0 | 0 | 5 | 0 |
| Y1 benefit | 0 | 0 | 0 | 0 | 0 |
| Y2 benefit | | 0 | 0 | 0 | 0 |
| Y3 benefit | | | 0 | 0 | 0 |
| Y4 benefit | | | | 0.15 | 0.30 |
| Y5 benefit | | | | | 0 |
| Total benefit | 0 | 0 | 0 | 0.15 | 0.30 |
| Discount (mid-year) | 1.30 | 1.23 | 1.16 | 1.09 | 1.03 |
| Discount (end year) | 1.26 | 1.19 | 1.12 | 1.06 | 1.00 |
| NPV underspend | 0 | 0 | 0 | 5.46 | 0 |
| NPV benefit | 0 | 0 | 0 | 0.16 | 0.30 |

We now have to recalculate the CESS for the ex post exclusion. This is done in table 14.

**Table 14 CESS for period 2 once $5 million has been excluded from year 4**

| | Calculation | Amount |
|---|---|---|
| Ex post exclusions (NPV) | $5 million x 1.09 | $5.46 million |
| NSP share | 30 per cent x $5.46 million | $1.64 million |
| Total financing cost (NPV) | $0.16 million + $0.30 million | $0.46 million |
| CESS at end of year 5 | $1.64 million - $0.46 million | $1.18 million |
| CESS in end of year 10 dollars | $1.18 x (1/0.75) | $1.58 million |

In summary, the NSP will be given a CESS payment of $1.58 million in the third regulatory control period to adjust for the extra CESS penalty incurred in the second regulatory control period. The NSP's RAB will also be adjusted; the NPV of the inefficient $5 million will be taken out of the RAB. Consumers will bear none of the inefficient $5 million in NPV terms.

# D Summary of submissions

**Table D.1 Summary of submissions on the capital expenditure sharing scheme**

| Issue | Respondent | Comments |
|---|---|---|
| General CESS | Grid Australia | Requested that the AER include guidance on its interpretation of the capital expenditure incentive objective, including the impact of other incentive schemes on this. Also, a description of likely scenarios in which the AER might depart from the guidelines. Also, a glossary of terms. |
| | NSW DNSPs | Suggested that the AER provide more guidance on the objectives underlying the development of incentive schemes, and how these align with the NEO and the pricing principles under the NEL. |
| | ENA | Suggested we use the term 'spending above the allowance' instead of 'overspending' and 'spending below the allowance' instead of 'underspending'. |
| | Council of Small Business Australia (COSBOA) | Supported the development of a CESS. |
| Declining incentives | Total Environment Centre's National Electricity Market Advocacy (TEC) | Agreed that there are declining incentives for efficient capex and this could be a problem in year five. |
| | NSW DNSPs | Agreed that there are declining incentives that may lead to inefficient timing of investment. |
| | EnerNOC | Stated that anecdotally, it seems that NSPs' attitudes towards demand side response initiatives vary over the regulatory period (since opex solutions become relatively less attractive over the period). |
| | Major Energy Users Inc. (MEU) | Stated that there is an incentive for NSPs to defer capex to later in the regulatory period. |
| | ENA | Acknowledged that the incentives decline but noted that there is little evidence that this has been an issue in practice. |
| | SP AusNet | Agreed that there are declining incentives over the regulatory period but did not agree that there was any evidence of NSPs taking advantage of this. |
| | Vic Department of State Development, Business and Innovation (DSDBI) | Noted that there was no trend towards overspending later in the period for Victorian NSPs, whether a capex incentive scheme applied or not. |
| | COSBOA | Was not convinced that the data conclusively suggests that NSP ramp up capex towards the end of the regulatory control period. Suggested alternative means for addressing declining incentives. |
| Whether NSPs respond to financial incentives | Aurora | Noted that its strategy centres around minimising the effects of its operations on customers. That is, their main incentive is not financial. |

| Issue | Respondent | Comments |
|---|---|---|
| Whether NSPs respond to financial incentives | Energy Users Association of Australia (EUAA)/ Carbon + Energy Markets (CEM) | Cited a range of evidence to suggest that government-owned NSPs pursue a range of objectives, not just financial. Also noted that due to a lower cost of capital and the state government owner also being the recipient of income tax, government-owned NSPs have an incentive to overinvest. |
| | Public Interest Advocacy Centre (PIAC) | Stated that where NSPs have multiple objectives (other than financial objectives), they will respond less to sharing schemes, and hence the power should be higher. |
| Whether a CESS should apply | Aurora | Noted that since a forecast is just that, it is not necessarily a good estimate of what the efficient level of capex actually is. Also noted that capex deferrals could result in wins and losses for a NSP under a CESS. Unforeseeable events could also have this effect. Instead of a CESS, Aurora suggested an approach similar to that taken for demand management could be appropriate. Aurora also supported an ex post approach in favour of the CESS. |
| CESS continuity | TEC | Agreed that the CESS should provide continuous incentives. |
| | EUAA/ CEM | Did not support constant incentives on the basis that there does not appear to have been a problem in practice and that providing constant incentives for assets of different lives would be overly difficult. |
| | EnerNOC | Supported removing any distortions that might change the attractiveness of demand side response over the regulatory period. That is, EnerNOC supported continuous incentives. |
| | PIAC | Expressed concerns about making the incentives continuous on the basis that this would be difficult for assets of varying asset lives. |
| | MEU | Supported continuous incentives applying to capex. |
| | CitiPower, Powercor and SA Power Networks | Supported a continuous and cumulative CESS. |
| | ENA | Supported continuous incentives. |
| | SP AusNet | Supported a continuous CESS. |
| | Energex | To the extent that a CESS is introduced, Energex supported it being continuous. |
| Whether NSPs should be rewarded for underspending | Aurora | Noted that its customers would expect the price to fall if the NSP had been able to restrict expenditure. |
| | APA Group | Noted concerns about whether the proposed CESS would actually identify areas of efficiency gains rather than simply removing cost cutting (regardless of the cause). |
| Symmetry of a CESS | TEC | Supported an asymmetric scheme with greater penalties than rewards |
| | NSW DNSPs | Supported a symmetric scheme. Thought this was more consistent with aligning incentives between capex and opex. Also stated that a symmetric scheme would be less biased in light of forecasting errors. |

| Issue | Respondent | Comments |
|---|---|---|
| Symmetry of a CESS | EnerNOC | Stated that while the reasons for an asymmetric CESS make sense, their key objective is for equal incentives across opex and capex. |
| | PIAC | Stated there is no theoretical reason why incentives should be symmetric. Supported the AER's reasons for asymmetry. |
| | ActewAGL Distribution | Did not support an asymmetric scheme. Stated that this could lead to imprudent decisions once a NSP is over its allowance. Also noted that thresholds for pass throughs and contingent projects are too high to be of use in mitigating spending above the allowance in some circumstances. |
| | MEU | Supported an asymmetric scheme, noting that this is what occurs in the competitive market. |
| | CitiPower, Powercor and SA Power Networks | Did not support an asymmetric scheme on the basis that forecasts could be inaccurate, capex above the allowance is not necessarily inefficient and reopeners etc. provide little protection against overspending. |
| | Grid Australia | Did not support an asymmetric scheme. Noted that this would not allow for balanced incentives across capex, opex and service. Also noted that there is little evidence of overspending by TNSPs and that allowances are not biased upwards. Also, the NSP will only know what its incentive is once it knows whether it will overspend or underspend. |
| | APA Group | Supported a symmetric scheme (if any). Noted concerns that an asymmetric CESS will significantly increase the investment hurdle meaning more efficient NSPs are less likely to strive for harder or riskier efficiency gains. Also concerned about unintended consequences in how it interacts with service. Also noted an asymmetric CESS increases a NSP's exposure to forecasting error. |
| | ENA | Supported a symmetric scheme. Did not believe there is sufficient evidence to conclude that forecasts will consistently be biased upwards. Also noted that underinvestment could actually be more costly than overinvestment which is contrary to the proposed CESS. Also, NSPs are not sufficiently protected from unforseen and uncontrollable events and an asymmetric scheme could be overly punitive in these cases. |
| | Energex | To the extent that there is a CESS, Energex preferred this to be symmetric. It stated that forecasting biases should be addressed through the forecasting methodology, symmetric schemes are the norm overseas and asymmetric scheme could have perverse outcomes. Energex also supported the CESS being applied on a cumulative basis. |
| | SP AusNet | Supported a symmetric scheme. Did not consider it appropriate for all NSPs (especially those that had responded to incentives). Stated that the changes to the NER should result in more balanced forecasts and that the ex post review for capex strengthened the incentives to remain within the forecast already. |

| Issue | Respondent | Comments |
|---|---|---|
| Symmetry of a CESS | Jemena | Supported a symmetric scheme similar to that previously applied in Victoria. |
| | COSBOA | Supported an asymmetric CESS with greater penalties than rewards. Supported the reasons for this in the issues paper. |
| Strength of the CESS reward | NSW DNSPs | Supported a moderate reward, recognising that a high reward could result in inefficient underspending. |
| | EUAA/ CEM | Supported a reward of around 35 per cent for all NSPs (that is, government-owned and private NSPs). |
| | EnerNOC | Supported rewards being equal across opex and capex. Failing that, supported rewards being at least as high as for opex. |
| | PIAC | Supported a reward at the lower end of the 20 to 30 per cent range due to concerns about capex deferral and over-forecasting by NSPs. Suggested that the power could be increased if the AER's information improved allowing it to determine whether a NSP had deferred inefficiently. |
| | SP AusNet | Stated that perhaps the current incentives are not strong enough but perhaps 20 to 30 per cent would be a good starting point. |
| | CitiPower, Powercor and SA Power Networks | Stated that the reward should be the same as for opex so as to limit substitution between the two categories of expenditure. |
| | Energex | If a CESS is introduced, supported it being low powered. Energex also supported the strength being balanced with incentives for opex and service. |
| Strength of the CESS penalty | TEC | Supported a penalty that is greater than 30 per cent. |
| | NSW DNSPs | Supported a moderate penalty, equal to the reward applying to underspends. Stated that the penalty might be too high in light of the ex post review also applying. Did not agree that forecasts are more likely to be biased upwards. Noted that pass through, re-opening and contingent project provisions had high thresholds and therefore did not offer much protection to NSPs. |
| | EUAA/ CEM | Supported a penalty of 70 per cent for government owned NSPs on the basis that this is effectively a penalty of 50 per cent due to the effective WACC being lower than the regulated WACC. Supported a penalty of 50 per cent for privately owned NSPs. |
| | PIAC | Stated that the penalty should be at least 50 per cent, with an average penalty greater than this. Suggested that the AER consider whether NSPs have a lower cost of capital than the regulated WACC and factor this into the power of the incentive. |
| | SP AusNet | Supported the penalty being the same power as the reward (starting around 20 to 30 per cent). |
| | Consumer reference group (CRG) | Stated that NSPs need stronger incentives not to overspend. Suggested that none of the overspend should be included in the RAB. If not, the WACC should be reduced to reflect this. |

| Issue | Respondent | Comments |
|---|---|---|
| Strength of the CESS penalty | MEU | Stated that consumers should not have to bear any of the costs of an overspend. |
| | Energex | If a CESS is introduced, supported it being low powered. Energex also supported the strength being balanced with incentives for opex and service. |
| | Ergon Energy | Cautioned against introducing stronger incentives. |
| Power of the CESS | Grid Australia | Suggested that the following factors be considered in determining the power of the incentive: the ease of achieving efficiency improvements, the confidence in the expenditure forecast, the power of other incentives schemes (opex, service), and the impact of exogenous factors on cost. |
| One size fits all or a number of CESSs | TEC | Stated that there are differences due to ownership (government or private) and type (DNSP or TNSP) and hence, at least four schemes should be developed. |
| | EUAA/ CEM | Stated that overspending is largely an issue for government-owned NSPs. For this reason, the incentive schemes should be different for private and non-private NSPs. Supported a higher powered asymmetric CESS for government-owned NSPs. |
| | PIAC | Noted that the power of the incentive could differ between DNSPs and TNSPs. Also suggested there could be differences due to ownership. |
| | MEU | Supported one scheme for all NSPs. |
| | CitiPower, Powercor and SA Power Networks | Supported one CESS but with higher rewards for more efficient NSPs. |
| | Grid Australia | Suggested that the AER develop TNSP specific guidelines on the basis that the capex profile is different, the coverage of service incentive schemes is different, interactions between the wholesale market is different and the form of price control is different. |
| | APA Group | Suggested that different schemes be developed for TNSPs and DNSPs. Stated that TNSPs are often exposed to customer driven transmission level extensions with short lead times. |
| | ENA | Supported having different schemes for TNSPs and DNSPs. Also supported schemes being tailored to suit the different circumstances of different NSPs, suggested criteria to inform this. |
| | Jemena | Supported the AER tailoring the incentives to the circumstances of each NSP. |
| | Energex | Supported one scheme applying to all with the ability to make minor changes to reflect individual differences between NSPs. Recommended that the AER develop criteria to be used in determining whether a CESS should apply to individual NSPs. |
| | SP AusNet | Supported one scheme but with aspects adjusted to account for differences in jurisdiction, type and NSP. Recommended the STPIS guidelines as a way to achieve this. |

| Issue | Respondent | Comments |
|---|---|---|
| One size fits all or a number of CESSs | Ergon Energy | Supported one scheme applying to all with the ability to make minor changes to reflect individual differences between NSPs. In tailoring any scheme, the AER could consider previous capex history, any inherent volatility in cost structures and financial solvency and liquidity. |
| | COSBOA | Stated that the WACC for government businesses is lower, meaning higher incentives for government NSPs are required. Also supported different approaches on the basis of ownership given other theoretical reasons underpinning this. Did not consider there to be a need for different schemes for DNSPs and TNSPs. |
| Exclusions from the CESS | NSW DNSPs | Stated that prudent and efficient DNSPs respond to changing circumstances relating to economic conditions, customer-driven demand, asset information and new legislative and regulatory obligations and that the CESS should be adjusted to account for these factors. |
| | Jemena | Supported excluding certain categories of uncontrollable capex from the CESS, to be determined for each NSP on a case by case basis in the framework and approach phase of the price review process. |
| | Ergon Energy | Concerned that uncontrollable cost categories are not able to describe all circumstances that could result in an over/under spend. Difficult to isolate separate items or events which would individually account for a variation from a forecast. |
| | Energex | Supported the exclusion of capex associated with cost pass throughs, contingent projects and re-openers. Supported ability for NSPs to nominate categories of capex for exclusion on an individual and ex ante basis. Considered adjustments appropriate where assumptions underpinning capex forecasts change materially during the regulatory period. |
| | SP AusNet | Supported NSPs being able to propose exclusions including uncontrollable capex and capex for reliability improvements. |
| | PIAC | Stated that perhaps there is a case for excluding shorter lived assets from the CESS, in particular, reflecting the difficulty in accurately forecasting IT costs. Also noted that there could be a case for excluding 'innovation' costs. |
| | ActewAGL | Supported the guidelines including principles for determining what can be excluded from the CESS. |
| | MEU | Supported capex being adjusted for actual growth and achieved replacement before the CESS is applied. |
| | CitiPower, Powercor and SA Power Networks | Supported capex associated with contingent projects, pass throughs and re-openers being excluded from the CESS. Suggested that the AER develop a defined and agreed list of principles or criteria for capex that could be excluded from the CESS. |
| | Grid Australia | Noted that demand, the form of price control, the length of the regulatory period and the treatment of less certain projects and unexpected costs can all result in windfall gains/losses. |

| Issue | Respondent | Comments |
|---|---|---|
| Exclusions from the CESS | ENA | Supported the guidelines including a defined and agreed set of principles and criteria for identifying potential exclusions from the CESS with NSPs able to apply for these exclusions. |
| | DSDBI | Supported adjustments for growth assumptions, labour and materials |
| | COSBOA | Did not support any exclusions being allowed. |
| Inclusion of the power of the CESS in the guidelines | PIAC | Supported the power of the CESS (or the method for determining the power of the CESS) being included in the guidelines. |
| | CitiPower, Powercor and SA Power Networks | Supported the power of the CESS being included in the guidelines with flexibility for higher rewards for more efficient NSPs. |
| | Grid Australia | Supported the incentive rates (or methodology for determining these) being included in the guidelines. |
| | ENA | Recommended a range and criteria be included in the guidelines with the specific power to be determined in the framework and approach stage. |
| | SP AusNet | Stated that the guidelines should set out the design of the incentive and the AER's approach to determining the power. |
| | Energex | Supported there being up-front guidance on the power of any CESS. |
| | COSBOA | Supported some guidance being included in the guidelines but some flexibility left for the AER to consider differences between NSPs and asset lives. |
| Interaction between CESS and ex post review | APA Group | Suggested that the CESS should not apply at all where the AER in its ex post review has found the expenditure to be efficient. |
| | NSW DNSPs | Stated that the CESS should not apply in addition to any exclusion of capex from the RAB. |
| | CitiPower, Powercor and SA Power Networks | Requested that the AER clarify how it will adjust the CESS when capex is excluded from the RAB through the ex post review. |
| Interactions between capex and opex | NSW DNSPs | Stated there is a need to recognise capex and opex trade-offs. In particular, if a NSP stays within its overall allowance but substitutes between opex and capex, this is not necessarily inefficient and should not be penalised. |
| | EnerNOC | Noted concerns about NSPs substituting between capex and opex. Recommended that we adopt an approach similar to that adopted by Ofgem - that is, an approach that considers expenditure collectively. In the absence of this EnerNOC recommended that the incentive to reduce capex should be at least as strong as the incentive to reduce opex. |

| Issue | Respondent | Comments |
|---|---|---|
| Interactions between capex and opex | PIAC | Noted the incentives to substitute between capex and opex should be limited but suggested that this would be achieved so long as the incentives for capex were higher. |
| Interaction between CESS and capex forecasting | PIAC | Suggested that, to the extent that there is a 50 per cent or higher penalty on overspending, the AER will have to be more rigorous in assessing capex forecasts (due to the increased incentive to inflate forecasts). |
| Interactions between incentive schemes | PIAC | Suggested that the AER develop a suite of leading performance indicators to monitor the effect of the CESS/EBSS on service. |
| Effect of asset life on power of the incentive | EUAA/ CEM | Noted that asset life affects the power of the incentive and suggested that this should be accounted for in the CESS. |
| Design of the CESS | ActewAGL | Supported the ESC's previous Capital Expenditure Carryover Mechanism that worked more like the EBSS and used a comparison of returns on investment. |
| Issue of forecast capex in year 5 | Grid Australia | Asked whether the CESS should apply to year five given it will only be a forecast. Tended to support the CESS applying over the regulatory period (even if year five was only a forecast). |
| Concern about capex deferral | DSDBI | Raised concerns that a form of CESS applied previously in Victoria led to widespread capex deferral by NSPs. Noted that any new form of CESS should address this potential problem. |
| Other - tax and tax depreciation | CitiPower, Powercor and SA Power Networks | Noted that the AER should set out how it intends to address issues of tax and tax depreciation. Similarly the AER should set out how and where the reward/penalty will be applied. |
| Other - incentives for inefficient deferral | Grid Australia | Offered to meet with the AER to develop ways in which to overcome the incentive for TNSPs to inefficiently defer capex between periods. |

**Table D.2 Summary of submissions on use of forecast or actual depreciation**

| Issue | Respondent | Comments |
|---|---|---|
| Default depreciation approach | SP AusNet | Strongly supported the use of forecast depreciation as the default. Agreed that the factors identified are important considerations for the use of actual or forecast depreciation. |
| | ENA | Supported forecast depreciation as a default approach, where a CESS is in place. |
| | Jemena | Supported the use of forecast depreciation as default. Actual depreciation should only be used in exceptional circumstances. |
| | Ergon Energy | Supported the use of forecast depreciation as default. Broadly supported further consideration of the factors. |
| | Energex | Supported forecast depreciation as a default approach, where a CESS is in place. Supported that relevant factors impacting depreciation identified by the AER. |
| | MEU | Supported forecast depreciation should be used all the time for rolling forward the RAB. Considered the full impact of the different depreciation approaches was not fully examined in the issues paper. |
| | CitiPower, Powercor and SA Power | Supported the use of actual depreciation given that it provides the strongest incentive to minimise capex. Thought issue of different power of incentives for different asset lives counter-balanced by the fact that short lived assets are typically a small percentage of the asset base and there is limited scope to substitute away from “poles and wires” type assets. |
| | PIAC | Agreed that, with a CESS and ex post review in place, it is most appropriate for the AER to rely on forecast depreciation, rather than actual depreciation to roll-forward into the RAB. |
| | DSDBI | Supported use of forecast depreciation. |
| | COSBOA | Supported the approach outlined in the issues paper. |
| Criteria for choosing depreciation approach | APA Group | Stated that AER has not acknowledged the influence that using forecast depreciation has on incentives to underspend. |
| Criteria for adopting actual depreciation | Grid Australia | Supported the AER's position though considered that instead of considering persistent overspending the AER should focus on evidence of persistent inefficient expenditure. |
| | CitiPower, Powercor and SA Power | Supported the use of actual depreciation, with reference to the impact on the factors listed in the NER. Requested a decision tree regarding the use of actual depreciation, rather than just a list of factors that it will consider. |
| | PIAC | Agreed that it would be useful for the AER to set out in its guidelines when and under what circumstances they might prefer to use actual depreciation. Agreed excess expenditure is a valid criterion to consider in determining whether to apply actual depreciation. |

**Table D.3 Summary of submissions on the ex post review**

| Issue | Respondent | Comments |
|---|---|---|
| General | PIAC | Supported having an ex post process but, given the difficultly in undertaking an ex post review, preferred ex ante measures as the primary means for driving efficiency. |
| | COSBOA | Supported ex ante measures being the primary means for pursuing capex efficiency. |
| | Grid Australia | Supported the ex post process only being used in extreme circumstances. |
| | ActewAGL | Supported ex ante measures being the primary focus for promoting efficient capex. |
| | MEU | Supported an ex post review in favour of any CESS. Stated that the AER should be reviewing all capex in all circumstances, not just when a NSP has overspent. |
| | ENA | Supported a staged process but requested more information on how the ex post capex mechanisms interplays with the ex ante mechanisms for capex and opex. |
| | Energex | Stated that the review should only apply where there is a cumulative overspend over the period. |
| Ex post statement of efficiency | CitiPower, Powercor and SA Power Networks | Stated that the AER should detail how it will undertake its assessment of efficiency required for the statement of efficiency (especially where a NSP has not overspent). |
| | ENA | Asked for clarification on what process the AER will follow in making its statement on the efficiency of capex entering the RAB. |
| Threshold for ex post review | ActewAGL | Supported the proposal to only undertake an ex post review where an overspend is significant. |
| | CitiPower, Powercor and SA Power Networks | Asked for clarity about whether the AER will only undertake the ex post review if there is a significant overspend. Requested further clarity on what would be considered significant. |
| | ENA | Requested further guidance on the AER's definition of a 'significant' or 'minor' overspend. |
| Use of information | ActewAGL | Supported the AER only considering information available to the NSP at the time the decision was made. |
| | CitiPower, Powercor and SA Power Networks | Stated that the AER should be clear that it will only consider information and analysis that the NSP could reasonably have been expected to have considered or undertaken at the time of undertaking the relevant capex. |
| | ENA | Stated that the AER should only consider information that the NSP had at the time of the investment. |
| | Ergon Energy | Stated that the AER should be bound by a 'no hindsight' rule. |

| Issue | Respondent | Comments |
|---|---|---|
| Use of information | DSDBI | Considered AER should only consider information available at the time the NSP undertook the capex. |
| Tiered approach | Aurora | Considered the proposed process to be workable. |
| | NSW DNSPs | Supported the ex post review being targeted rather than comprehensive. |
| | EnerNOC | Did not support an approach whereby the AER would not consider the efficiency of the capex if the NSP had the appropriate processes in place. |
| | PIAC | Supported the tiered approach suggested in the issue paper. |
| | MEU | Did not support a tiered approach. Believed that if there is any overspend, all capex should be assessed for efficiency. |
| | CitiPower, Powercor and SA Power Networks | Stated that the AER should set out a decision tree outlining the approach assessing all types of capex that can be excluded from the RAB. Requested greater clarity on a number of steps within the tiered approach. Also suggested that the guidelines provide guidance on how the NSP would be engaged at each stage of the process. |
| | Grid Australia | Supported the tiered approach included in the issues paper. Encouraged the AER to include specific guidance on the principles and criteria it will apply in undertaking ex post reviews. |
| | ENA | Requested greater clarity on how the AER will assess whether overspending is efficient. |
| | SP AusNet | Broadly supported the tiered approach outlined in the issues paper. |
| | Energex | Supported an amended staged process as outlined in attachment 1 of its submission. |
| | Ergon Energy | Supported a staged approach but requested greater clarity on how the stages would apply. Recommended that the AER be mindful of the regulatory costs associated with a full review of all capex. |
| Service standards | Energex | Did not support service standards being considered as part of the ex post review. |
| Extrapolation | Grid Australia | Noted that it would be inappropriate to extrapolate from the outcomes of an assessment of a limited number of projects to a wider range of projects. |
| Excluded capex that later becomes efficient | CitiPower, Powercor and SA Power Networks | Requested that the AER outline the process for assessing the potential re-inclusion of capex into the RAB where the capex later becomes efficient. Referred to the speculative investment amount provisions of the National Gas Rules. |
| | ENA | Recommended that the guidelines include information on how the AER will treat inefficient capex that later becomes useful. |
| | CRG | Requested guidance on this issue. |
| | Grid Australia | Similarly requested guidance on this issue. |

**Table D.4 Summary of submissions on capitalisation issues**

| Issue | Respondent | Comments |
|---|---|---|
| General | Ergon | Considered our approach was broadly reasonable. |
| | Energex | Considered our approach was broadly reasonable. |
| | ENA | Considered our approach was broadly reasonable. |
| Reviewing policy changes | MEU | Stated that the AER should review the appropriateness and application of any change in NSPs' capitalisation policies. |
| Standardisation | Grid Australia | Supported the principle that calculations of efficiency gains and losses for opex and capex, and rolling forward the RAB, be based on a consistent capitalisation policy over time for the same NSP. However, did not support a common capitalisation policy. |
| | MEU | Considered that the AER should establish a standard capitalisation policy for NSPs to use in regulatory accounts to complement benchmarking. |
| | Ergon | Considered DNSPs have a reasonably consistent approach to applying accounting standards to capitalising expenditure. However, there are differences in capitalisation rates meaning standardisation would be complex and inappropriate. |
| Clarity on approach | CitiPower, Powercor and SA Power | Considered the AER should set out a flow diagram on our assessment of capitalisation. |
| | Energex | Requested guidance on how the AER will adjust the RAB when it disallows expenditure (specific assets or classes which have already been added to the RAB and rolled forward). |
| EBSS interactions | ENA | Requested that the AER set out how capex excluded from the RAB is also removed from the EBSS. |
| Asymmetric CESS incentives | PIAC | Considered a high asymmetric penalty on capex overspends may help discourage capitalisation of opex. |

**Table D.5 Summary of submissions on related party margin issues**

| Issue | Respondent | Comments |
|---|---|---|
| Assessment approach | Grid Australia | Considered our proposed approach to the assessment of related party margins was reasonable. |
| | Energex | Considered that our approach appeared reasonable. |
| "Presumption test" | MEU | Did not support our approach to assessing related party margins (questioned whether the "presumption test" was sufficient). Suggested that the guidelines should refer to the testing that is done at the time of the revenue reset, and that the ex post review should follow the same principles as were used during the reset process. |
| Clarity on approach | CitiPower, Powercor and SA Power | Requested that we set out a flow diagram on our ex post assessment of related party margins. |
| | Energex | Requested guidance on how we will adjust the RAB when we disallow expenditure (specific assets or classes which have already been added to the RAB and rolled forward). |
| CESS interactions | ENA | Requested we set out how capex excluded from the RAB is also removed from the CESS. |
| Asymmetric CESS incentives | PIAC | Considered that a high asymmetric penalty on capex overspends may help discourage the inflation of related party margins. |

### Table D.6 Consumer Reference Group verbal input

| Summary of issues raised | AER response |
|---|---|
| The incentives for NSPs to stop overspending on capex are insufficient. In a competitive market, a business must absorb the entire overspend whereas under the current framework NSPs can pass on a proportion of their overspend to their customers. | Under our proposed guidelines NSPs will lose between 30 per cent and 100 per cent of any overspend. Customers should not bear any of the costs of an inefficient overspend. |
| Requested the AER to address the issue that the difference between actual and forecast WACC may affect capex incentives. Suggested that the AER should model the incentives under a range of WACCs. | Differences between a NSP's real and regulated WACC can change its incentives. However, without knowing what this difference is it is difficult to use this to inform the design of the CESS. |
| Noted that some jurisdictions have seen significant price increases. While the ex post review might assist in addressing this, price increases seem to be driven by high service standards and redundancy rates. | Capex overspends can be driven by different factors. We will review the reasons for any overspend through the ex post review. |
| Noted the incentives faced by government businesses are different to those of privately owned businesses. Also suggested that government owned NSPs have a lower actual WACC. Suggested that the AER should consider this in the design of its incentive schemes and it may require multiple schemes (or varying powered schemes). | This is discussed in section 2.3.4. |
| Questioned why any overspend should be rolled into the RAB. Stated that efficient capex should already be planned for or accepted through other avenues (contingent projects, pass throughs). Suggested that the WACC be lowered if NSPs can recover overspends. | If a NSP overspends it will lose 30 per cent automatically through the CESS. To the extent that a NSP inefficiently overspends, it could lose 100 per cent of the overspend. |
| There are various incentive schemes and the AER needs to ensure that when applied together, one does not distort the outcomes of another. | We have considered interactions between the various incentive schemes in developing our positions. |
| Asked whether expenditure that is excluded from the RAB but later considered efficient can be included back into the RAB. | This is discussed in section 4.3.1. |
| Stated that the CESS should reflect what really happened and that the targets should be changed to reflect exogenous shocks. | We do not propose to allow for exclusions from the RAB. The reasons for this are discussed in section 2.3.5. |
| Noted concerns about inter and intra period capex shifting. | The issue of inter period capex shifting will be assessed as part of our forecasting approach. Intra-period capex shifting has been addressed through our CESS since it provides constant incentives over the regulatory control period. |
| Suggested the AER should consider having an incentive that declines across the five year regulatory control period. | We have considered this in section 2.3.1. |
| Expressed concern around the relationship with demand management incentive scheme to reduce other areas of expenditure. | We have aimed to provide balanced incentives across opex, capex and service. |
| In regards to a threshold for the ex post review, noted:<br>▪ If the AER does not set a threshold this would be more of an incentive for NSPs to underspend.<br>▪ If the AER does set a trigger, this should just be the allowance.<br>▪ The AER should allow for 'necessary overspend'. | We have not included a trigger for the ex post review. We propose to review each NSP's capex (whether or not the NSP have over or underspent) following the process outlined in the guidelines. |