Capital Expenditure Incentive Guideline for Electricity Network Service Providers

July 2024

AUSTRALIAN ENERGY REGULATOR

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1 Overview

Incentive-based regulation is central to our approach to regulating electricity networks. It provides NSPs with incentives to pursue efficiency improvements to the benefit of both NSPs and network users. If a NSP spends less than its capital expenditure (capex) allowance, it can keep the benefits of financing the capex allowance until the end of the regulatory control period. At the end of the regulatory control period we update the Regulatory Asset Base (RAB) for actual capex. Consumers benefit into the future as the RAB is lower than it would have been if the NSP had spent its full allowance in delivering the service.

This guideline complements the incentives a NSP already has to deliver efficient capex. It outlines new ex ante and ex post measures to further incentivise efficient capex.

There are three main aspects to this:

1. We have developed a Capital Expenditure Sharing Scheme (CESS) to share efficiency gains and losses between NSPs and network users.
2. We have developed criteria for deciding whether to roll forward the RAB using depreciation based on forecast or actual capex.
3. There are new ex post measures to ensure that network users do not bear the costs of inefficient or imprudent overspends, capitalised operating expenditure (opex) or inflated related party margins.

The AER undertook a review of incentive schemes which it completed in 2023. This guideline incorporates revisions recommended by the review including:

- application of a lower sharing factor of 20 per cent to any underspend amount greater than 10 per cent of the approved forecast capital expenditure allowance
- new transparency measures which require NSPs to explain variations between capital expenditure forecasts and outcomes
- further guidance on application of the CESS to large transmission projects.

Version 2 of the Guideline, which incorporates these amendments, will apply to NSPs from the commencement of their first regulatory control period after the date of this guideline.

1.1 Structure

There are three main parts to this guideline:

1. Chapter 2 outlines our approach to the CESS. An example of how the CESS works is provided at Appendix A.
2. Chapter 3 outlines our approach to deciding whether to use forecast or actual depreciation when rolling forward the RAB.
3. Chapter 4 outlines our approach to ex post measures to incentivise efficient capex. This includes the process for assessing whether capex has been prudent and efficient and the factors we will consider in deciding whether to exclude capex from the RAB.

2 The Capital Expenditure Sharing Scheme

The CESS provides ex ante incentives for NSPs to undertake efficient capex during a regulatory control period. This chapter sets out how the CESS operates.

2.1 Objective

The overarching objective of the CESS is to provide NSPs with an incentive to undertake efficient capex during a regulatory control period. It achieves this by rewarding NSPs that outperform their capex allowance and penalising NSPs that spend more than their capex allowance. The CESS also provides a mechanism to share efficiency gains and losses between NSPs and network users.

Without a CESS, a NSP will face incentives that decline over a regulatory control period. If a NSP makes an efficiency gain in the first year of a five-year regulatory control period any benefit will last for four more years before we update the RAB for actual capex. In the final year however, the benefit will be approximately zero. This may lead to inefficient capex and inefficient substitution of opex for capex towards the end of a regulatory control period.

The CESS complements the rewards a NSP would already receive for an efficiency gain so the total benefit of an efficiency gain to a NSP will be the same in each year. The CESS also provides symmetric incentives in that the reward for an efficiency gain is equal to the penalty for an efficiency loss of the same quantum.

2.2 Rule requirements

Clauses 6.5.8A and 6A.6.5A of the NER set out the factors we must take into account in developing any CESS. Firstly, any CESS must be consistent with the capital expenditure incentive objective under clauses 6.4A and 6A.5A:

> *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.*

The capital expenditure criteria are contained in clauses 6.5.7(c) and 6A.6.7(c) and require us to be satisfied that capex is prudent and efficient and based on realistic demand forecasts. In deciding whether we are satisfied that the capex criteria are met, we must consider the capital expenditure factors in clauses 6.5.7(e) and 6A.6.7(e).

In addition, in developing any CESS, we must take into account the capital expenditure sharing scheme principles, outlined in clauses 6.5.8A(c) and 6A.6.5A(c). These include:

- NSPs should be rewarded or penalised for improvements or declines in the efficiency of capex
- these rewards and penalties should be commensurate with the efficiencies or inefficiencies in capex, but rewards and penalties do not need to be the same.

In developing any CESS, we must also take into account:

- the interaction of the CESS with any other incentives the NSP has to undertake efficient capex or opex
- the capital expenditure objectives (outlined in clauses 6.5.7(a) and 6A.6.7(a)) and, if relevant, the operating expenditure objectives (outlined in clauses 6.5.6(a) and 6A.6.a(a)).

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

- make that decision in a manner that contributes to the capital expenditure incentive objective
- take into account the capital expenditure sharing scheme principles, the capital expenditure objectives, other incentive schemes, and, where relevant, the operating expenditure objectives, as they apply to the particular NSP, and the circumstances of the NSP.

2.3 General application of the scheme

This section describes how we calculate efficiency gains or efficiency losses, and the method by which efficiency gains or losses are shared between NSPs and network users. This involves four steps:

1. We calculate efficiency gains and losses in net present value (NPV) terms. We do this for each year of the regulatory control period and then the total efficiency gain/loss is calculated for the regulatory control period.
2. We apply a sharing factor to the total efficiency gain/loss to calculate the NSP's share of the gain/loss.
3. We calculate financing benefits/costs that accrue through the regulatory control period.
4. We calculate the CESS reward/penalty by subtracting the financing benefit/cost that has accrued from the NSP's share of the total efficiency gain/loss.

We discuss these steps in more detail below. The CESS penalty or reward forms a separate building block for the NSP's revenue allowance in the following regulatory control period.

2.3.1 Calculating efficiency gains and losses

A NSP's allowance is our best estimate of efficient capex. In this way, if the NSP spends less than its capex allowance, we consider this is an efficiency gain for the purpose of applying the CESS. Conversely, if a NSP spends more than its allowance, this counts as an efficiency loss when applying the CESS.

To calculate the annual efficiency gain/loss, we subtract the NSP's actual capex from its capex allowance in each year of the regulatory control period.

The capex allowance is calculated as our approved allowance (as determined prior to the start of the regulatory control period), plus any adjustments we allow from pass throughs, reopening of capex or contingent projects.

Actual capex in each regulatory year is inclusive of all capex, less any capex the NSP incurs in delivering a priority project approved under the network capability component of the service target performance incentive scheme for Transmission Network Service Providers.

When calculating the annual efficiency gain/loss, we may make further adjustments for deferrals of capex, or where we exclude capex from the RAB after an ex post review (discussed in sections 2.5 and 2.6).

For the final year (and potentially the penultimate year) of the regulatory control period, we will use an estimate of actual capex (see section 2.4).

We will calculate the efficiency gain for year one as:

> Year 1 efficiency gain = capex allowance for year 1 – actual capex in year 1

We will discount the efficiency gain from each year into its NPV at the end of the regulatory control period. In doing so we will assume capex occurred in the middle of the year. To calculate the total efficiency gain, we add the annual efficiency gains in NPV terms.

> Total efficiency gain = NPV year 1 efficiency gain + NPV year 2 efficiency gain + NPV year 3 efficiency gain + NPV year 4 efficiency gain + NPV year 5 efficiency gain

The above calculations are represented by the following equation:

$$Total\ efficiency\ gain = \sum_{n=1}^{p} \frac{1}{(1+WACC)^{n-p-0.5}} \times (F_n - A_n)$$

Where:

> n is the regulatory year
>
> *WACC* is the nominal weighted average cost of capital that applied during the regulatory control period
>
> p is the length of the regulatory control period
>
> F_n is the capex allowance for year n
>
> A_n is actual capex for year n.

2.3.2 Applying the sharing factor

A sharing factor of 30 per cent will apply to all efficiency losses (i.e. overspending in comparison to the capital expenditure forecast), and a tiered rate will apply to efficiency gains (underspending in comparison to the capital expenditure forecast).

Specifically, if an NSP underspends in comparison to its approved capital expenditure forecast, a sharing ratio of:

- 30 per cent will apply to any underspend amount up to and including 10 per cent of the approved forecast capital expenditure allowance; and
- 20 per cent will apply to any underspend amount greater than 10 per cent of the approved forecast capital expenditure allowance.

A sharing factor of 30 per cent allocates 30 per cent of any efficiency gain or loss to the NSP. The remaining 70 per cent is allocated to network users. A sharing factor of 20 per cent allocates 20 per cent of any efficiency gains to the NSP and the remaining 80 per cent to network users.

If an NSP overspends against its forecast, or underspends by 10% or less, the CESS is calculated as follows:

NSP share = total efficiency gain or loss × 30 %

If an NSP underspends by more than 10% the CESS is calculated as follows:

NSP share = (0.1 × forecast capex) × 30 % + (0.9 × forecast capex – actual capex) × 20 %

A worked example is provided in appendix A.

2.3.3 Accounting for benefits and costs already accrued

To ensure that the power of the incentive is the same in each year of the regulatory control period, the CESS takes into account any benefits or costs that have already accrued to the NSP during the regulatory control period. This is the financing benefit of the underspend or the financing cost of the overspend.

We assume capex is incurred in the middle of each year. Hence, in the year of the underspend, the NSP will recover only half a year of benefit. In following years, the NSP will retain a full year of benefit calculated as the underspend multiplied by the WACC. We represent this in the following equation.

$$Year\ n\ financing\ benefit = [(1+WACC)^{0.5}-1]\times(F_n - A_n) + \sum_{j=1}^{n-1} WACC \times \left(F_j - A_j\right)$$

Where:

j is a regulatory year in the current regulatory control period prior to year *n*
reward = NSP share – net financing benefit

F_j is the capex allowance for year *j*

A_j is actual capex for year *j*

To put the financing benefits from each year into constant terms, we apply a discount factor to the benefits from each year. We calculate this discount rate on the basis that financing benefits accrue at the end of each year. We then sum the discounted financing benefits from each year to get a net financing benefit for the regulatory control period. We will calculate this using the following equation.

$$Net\ financing\ benefit = \sum_{n=1}^{p} \frac{1}{(1+WACC)^{n-p}} \times year\ n\ financing\ benefit$$

2.3.4 CESS reward or penalty

To calculate the CESS reward or penalty payable to the NSP, we then subtract the net financing benefit from the NSP's share of the cumulative efficiency gain.

CESS reward = NSP share – net financing benefit

We will apply this CESS reward (penalty) as an additional building block adjustment to the NSP's revenue over the upcoming regulatory control period.

2.4 Final year adjustment

Because regulatory determinations are finalised prior to the end of the regulatory control period, actual capex for the final year of the regulatory control period will not be available when we calculate the CESS rewards or penalties. Instead, we will use an estimate of capex to calculate the efficiency gains or losses for the final regulatory year.

At the next regulatory determination actual capex data will be available for that year. Where a NSP's actual capex differs from the capex estimate used to calculate the CESS, we will make an adjustment to account for the difference. The adjustment for the final year of the regulatory control period will be:

$$Final\ year\ adjustment = \left(A_p^* - A_p\right) \times \left[\frac{NSP\ sharing\ factor - 1}{(1 + WACC)^{-0.5}} + 1\right]$$

Where:

A_p* is the estimate of actual capex in the final year of the regulatory control period that we have used to initially calculate the CESS rewards or penalties

A_p is actual capex in the final year of the regulatory control period.

We will apply a discount rate to account for the time value of money. This adjustment may also be required for the penultimate year of the regulatory control period where finalised actual capex figures for that year are not available before finalising the regulatory determination.

2.5 Transparency

Our assessment of capex proposals is primarily based on revealed costs, that is actual capex undertaken by the NSP in previous years. The CESS provides incentives for NSPs to spend less than forecast. The revealed costs then form the basis for future forecasts.

Given the capital expenditure allowance for a regulatory period is set as an efficient allowance, we expect NSPs to explain the reasons for their decisions to spend more or less than the capex allowance. The information will assist stakeholders understand the extent to which differences between actual and forecast capital expenditure are driven by efficiency gains or other factors such as deferrals, changes in materials and labour costs, and changes in regulatory obligations.

If an NSP proposes an increase in capex above historic levels as part of a reset process, we expect the NSP to explain the reasons for the increase. Relevant information includes:

- proposed capex compared to historic capex by asset category

- whether new step changes (such as new regulatory obligations) apply and their impact on costs
- any changes to the age profile of assets and the impact of those changes on replacement capital expenditure
- the reason for and costs of any major new projects such as transmission inter-connectors
- the extent and impact of deferrals in the previous regulatory period.

This information will assist stakeholders to understand differences between revealed capex outcomes and proposed capex. It will also contribute to our assessment of capex proposals. Guidance on the information requirements will be provided in our Reset Regulatory Information Notices.[1]

2.6 Application of the CESS to large transmission projects

Elements of capex are not recurrent and can be difficult to forecast using the revealed cost model. This is particularly true for large transmission projects.

For this reason we may vary or not apply the CESS for transmission contingent project proposals submitted by TNSPs. For a contingent project we may apply the CESS, not apply the CESS, or apply a CESS with a lower sharing factor than 30 per cent.

If we vary the CESS for a contingent project two CESS schemes will be required, one for the contingent project and a second for all other capex. In this scenario CESS payments for the contingent project would be solely based on under-or over-spending on the contingent project. We will determine whether or not to apply a separate CESS scheme for a contingent project in response to TNSP proposals.

In determining whether or not to exclude, or vary, the application of the CESS to contingent projects we will take into account:

- the TNSP’s CESS and capital expenditure proposals
- benefits to consumers from the exemption
- the size of the project
- the degree of capital expenditure forecasting risk[2]
- stakeholder views.

Our default position is to apply the CESS and we will be careful in making exclusions.

2.7 Adjusting for deferral of capex

In some circumstances, without an adjustment to the CESS, consumers may not share in the benefits where capex is deferred from one regulatory control period to the next regulatory control period. For instance, if a NSP's capex forecast for the next regulatory control period materially increases because capex was deferred in the current regulatory control period, a

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1 The information requirements will be set out in Reset RINS released from 2023.

2 Taking into account, for example, the extent to which a project is already outsourced and subject to contract terms.

NSP's reward from deferring capex through the CESS, will likely exceed the benefit to consumers from the deferral.

To help consumers share in the benefits from deferred capex, we will make an adjustment to the CESS payments where a NSP has deferred capex in the current regulatory control period and:

1. the amount of the deferred capex in the current regulatory control period is material, and
2. the amount of the estimated underspend in capex in the current regulatory control period is material, and
3. total approved forecast capex in the next regulatory control period is materially higher than it is likely to have been if a material amount of capex was not deferred in the current regulatory control period.

Where we determine such an adjustment will be made, we will reduce the CESS payments a NSP would have otherwise received in the next regulatory control period for capex underspends in the current regulatory control period.

The adjustment is the present value of the estimated marginal increase in forecast capex in the next regulatory control period attributable to capex deferred in the current regulatory control period. We will subtract this estimate from the total efficiency gain which is otherwise calculated in accordance with section 2.3.1 of this guideline. Adjusting for an ex post exclusion from the RAB

2.8 Adjusting for an ex post exclusion from the RAB

As discussed later in this guideline, in certain circumstances we are able to exclude capex from the RAB. Where this occurs, we will adjust the CESS payments. Otherwise a NSP could bear more than 100 per cent of the cost of the excluded capex.

At the time of a determination, we will calculate the CESS for the regulatory control period just ending. We will also undertake an ex post review (which could lead to exclusions from the RAB) at this time for the first three years of the regulatory control period and the last two years of the regulatory control period preceding that.

Where we exclude some capex incurred in year 1, 2 or 3 from the RAB, the CESS calculation will be different in that year. This involves a change to the general application of the scheme. Instead of calculating the efficiency gain as the capex allowance minus actual capex, we will substitute actual capex with actual capex minus the excluded capex. For example, where there is an ex post exclusion in year 1 of the regulatory control period the efficiency benefit will be calculated as follows:

> Year 1 efficiency benefit where there is an ex post exclusion in year 1 = capex allowance for year 1 – (actual capex in year 1 – ex post exclusion in year 1)

The adjustment will be different where we exclude capex from years 4 or 5 of the preceding regulatory control period. This is because the ex post review of capex in years 4 and 5 will occur at the end of the following regulatory control period. (That is, five years later for a five year regulatory control period.) At this later date we will adjust the RAB to remove the inefficient or imprudent capex. In doing so, we may need to reverse any net financing benefit the NSP receives in the period between when we first added the capex to the RAB and when we remove it at a later date.

At the same time we will adjust the CESS. To the extent that the NSP has already borne a CESS penalty on an amount of capex we later exclude from the RAB, we will need to remove this from the CESS in the following period. In particular, we will refund the NSP the penalty it has already borne under the CESS for the capex that we have excluded from the RAB. We will adjust the refund to account for the time value of money.

3 Depreciation

When we roll actual capex into the RAB we also depreciate it. The type of depreciation used to roll forward the RAB will affect the incentives for efficient capex. Depreciation used to roll forward the RAB can be based on:

- actual capex incurred during the regulatory control period (actual depreciation), or
- the capex forecast at the start of the regulatory control period (forecast depreciation).

Using actual depreciation to roll forward the RAB provides stronger incentives for efficient capex compared to using forecast depreciation:

- If there is a capex overspend, actual depreciation will be higher than forecast depreciation. This means that the RAB will increase less at the next regulatory control period than it would if forecast depreciation were used. Hence, the NSP will earn less into the future (i.e. it will bear more of the cost of the overspend into the future) than if forecast depreciation had been used to roll forward the RAB.
- If there is a capex underspend, actual depreciation will be lower than forecast depreciation. This means that the RAB will increase more at the next regulatory control period than it would if forecast depreciation were used. Hence, the NSP will earn more into the future (i.e. it will retain more of the benefit of an underspend into the future) than if forecast depreciation had been used to roll forward the RAB.

3.1 Objective

The objective in deciding whether to use depreciation based on forecast capex or actual capex to roll forward the RAB is to ensure that the overall ex ante incentives for a NSP to undertake efficient capex are appropriate.

3.2 Rule requirements

Clauses S6.2.2B(a) and S6A.2.2B(a) of the NER provide us with flexibility to roll forward a NSP's RAB with either actual or forecast depreciation. Under clauses 6.4A(b)(3) and 6A.5A(b)(3) of the NER, we are required to include in this guideline our process for determining which form of depreciation we propose to use in the RAB roll forward process.

Under clauses S6.2.2B and S6A.2.2B of the NER, our decision on whether to use actual or forecast depreciation must be consistent with the capital expenditure incentive objective. In making this decision, we must have regard to:

- any 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
- this guideline
- the capital expenditure factors.

3.3 Approach

The depreciation approach is one part of the overall capex incentive framework. Where we apply a CESS, a NSP will already have incentives to pursue efficiency gains in relation to capex. Forecast depreciation would maintain these incentives whereas actual depreciation would increase these incentives. Actual depreciation can also result in different incentive powers for assets with different asset lives whereas forecast depreciation leads to the same incentive power regardless of the asset life.

Our default position is to apply forecast depreciation except where:

- there is no CESS in place and therefore the power of the capex incentive may need to be strengthened, or
- a NSP's past capex performance demonstrates evidence of persistent overspending or inefficiency, thus requiring a higher-powered incentive.

In considering whether to apply actual depreciation in either of the above 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 performance schemes
- the substitutability of assets of different asset lives.

4 Ex post measures for efficient capital expenditure

This chapter sets out our approach to ex post measures for incentivising efficient and prudent capex during a regulatory control period. There are two elements to this:

1. We are required to produce a statement on the efficiency and prudency of all capex that is to be rolled into the RAB (an ex post statement)
2. We may exclude certain types of capex from being included in the roll forward of the RAB.

4.1 Objective

The overarching objective of the ex post statement of efficiency and prudency is to provide information about the efficiency and prudency, or otherwise, of capex to be included in the RAB.

The objective of excluding certain types of capex from the RAB is to help ensure network users only pay for capex associated with providing network services which reasonably reflects the capital expenditure criteria.

4.2 Rule requirements

Clauses 6.12.2(b) and 6A.14.2(b) require us to include in any draft or final regulatory determination, a statement on the extent to which the roll forward of the RAB meets the capital expenditure incentive objective (defined in clauses 6.4A and 6A.5A). This statement will be for the regulatory control period just ending.

Clauses S6.2.2A and S6A.2.2A provide that in certain circumstances we may reduce the amount by which a NSP's RAB is to be increased as part of the RAB roll forward:

- where a NSP has spent more than its capex allowance,[3] we may exclude capex above the allowance from the RAB if it does not reasonably reflect the capital expenditure criteria
- where a NSP has incurred capex that represents a margin paid by the NSP, we may exclude that capex from the RAB where the margin refers to arrangements that do not reflect arm’s length terms
- where a NSP's capex includes expenditure that should have been classified as opex as part of a NSP’s capitalisation policy submitted to us as part of a regulatory proposal, we may exclude this from the RAB.

The relevant period over which this assessment is to occur is the first three years of the regulatory control period just ending and the last two years of the preceding regulatory control period. This differs from the period for the ex post statement and the CESS.

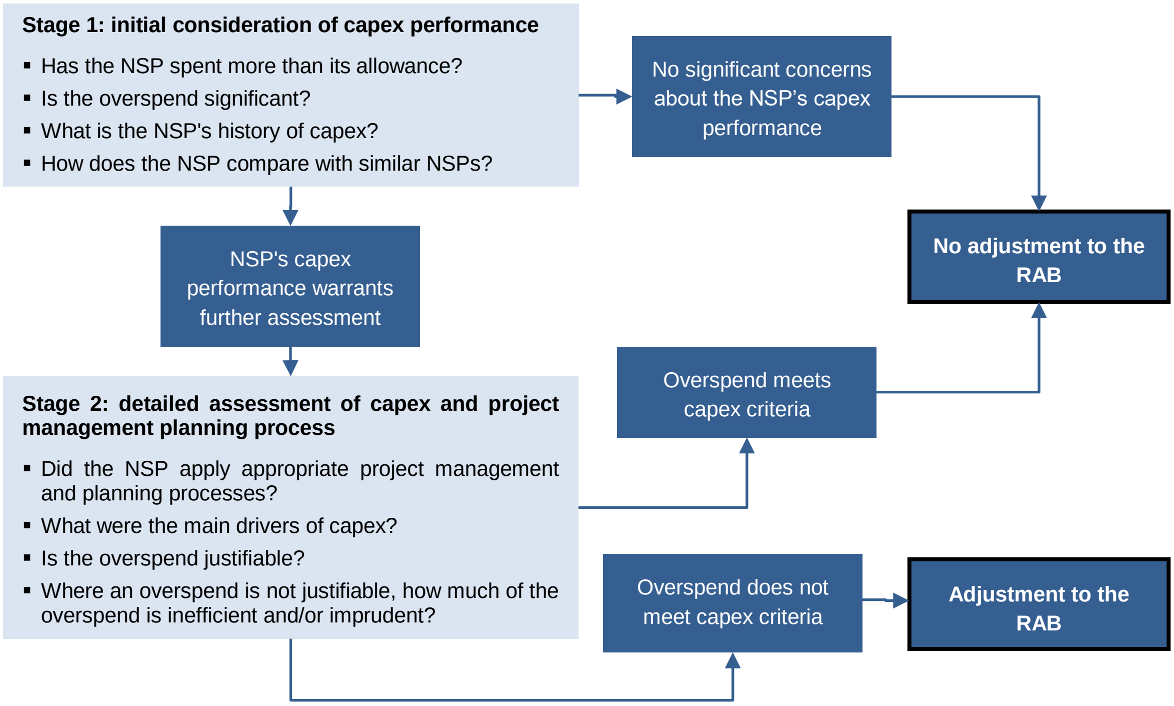
[3] Plus (or minus) any adjustments provided for under the reopening provisions, as a pass through or as a contingent project.

4.3 Ex post review process

We will undertake a staged process for the purpose of the ex post statement and for making any decisions on whether to exclude capex overspends from the RAB. We outline this process in Figure 1.

In undertaking this review we 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'.[4]

Figure 1 Staged process for ex post review



Our process for assessing the NSP's capex against the capital expenditure criteria involves two stages.

4.3.1 Stage 1

In the first stage we will consider the NSP's actual capex performance. The key questions are:

- Has the NSP overspent against its allowance?
- If so, is the overspend significant?
- What is the NSP's history of capex?

We will consider whether there is a cumulative overspend over the relevant period and the NSP's capex history. In investigating any overspend, we may consider the drivers of the overspend and whether these drivers were within the control of the NSP.

[4] NER, cll. S6.2.2A(h)(2) and S6A.2.2A(h)(2)

Where relevant, we may draw on high level benchmarking or other information to assess how the NSP has performed on capex relative to other similar NSPs. For example, if similar NSPs had faced the same exogenous factors then a comparison between the NSPs could indicate how well each NSP had responded to these factors. In addition, we could use benchmarking as a filter to identify the key drivers of capex which could be used to target our assessment in stage 2. We will most likely undertake these comparisons at a high level and will not conduct more detailed NSP specific analysis until stage two of the assessment process.

If, from this high-level assessment, we have no significant concerns about the NSP's capex performance over the relevant period, we may conclude that the NSP has been broadly efficient and prudent. In this case no further assessment of capex efficiency and prudency would be required. If we consider the NSP's capex performance warrants further assessment, and there has been a cumulative overspend over the relevant period, our assessment would progress to stage 2.

4.3.2 Stage 2

Stage 2 will involve a detailed assessment of the drivers of the NSP's capex and the NSP's management and planning tools and practices. This will likely draw on the expertise of engineers and other external consultants.

In assessing the NSP's planning and management tools and processes, we will have regard to whether the NSP has applied:

- for major projects, a Regulatory Investment Test (RIT-D or RIT-T) that complies with the relevant guidelines
- appropriate project management plans and processes including asset management, project delivery controls, procurement strategies, asset lifecycle management, resourcing strategies, program management and risk management
- appropriate project governance and capital governance.

It will also be important to assess whether the NSP applied these plans, processes and governance arrangements in undertaking capex. One way in which NSPs could potentially demonstrate this would be to attain national or international accreditation in asset management.[5] In this assessment we could draw from any independent audits undertaken as part of a NSP's asset management and planning processes.

In assessing a NSP's capex drivers, we could consider:

- the findings of any independent audit undertaken as part of a NSP's asset management and planning processes
- repex and augex models to assess replacement and augmentation capex
- a sample of customer connections, or a benchmark of customer connections for multiple small connections

[5] The United Kingdom standard for asset management (PAS 55) is soon to become an international standard (ISO 55000). OFGEM requires PAS 55 accreditation for all distribution network service providers in Great Britain.

- any changes to demand that could have influenced capex outcomes
- IT capex
- indicators of service performance
- case-by-case or project-by-project assessments of other projects.

Once we have identified the capex drivers and we have assessed the NSP's management and planning processes, we will consider:

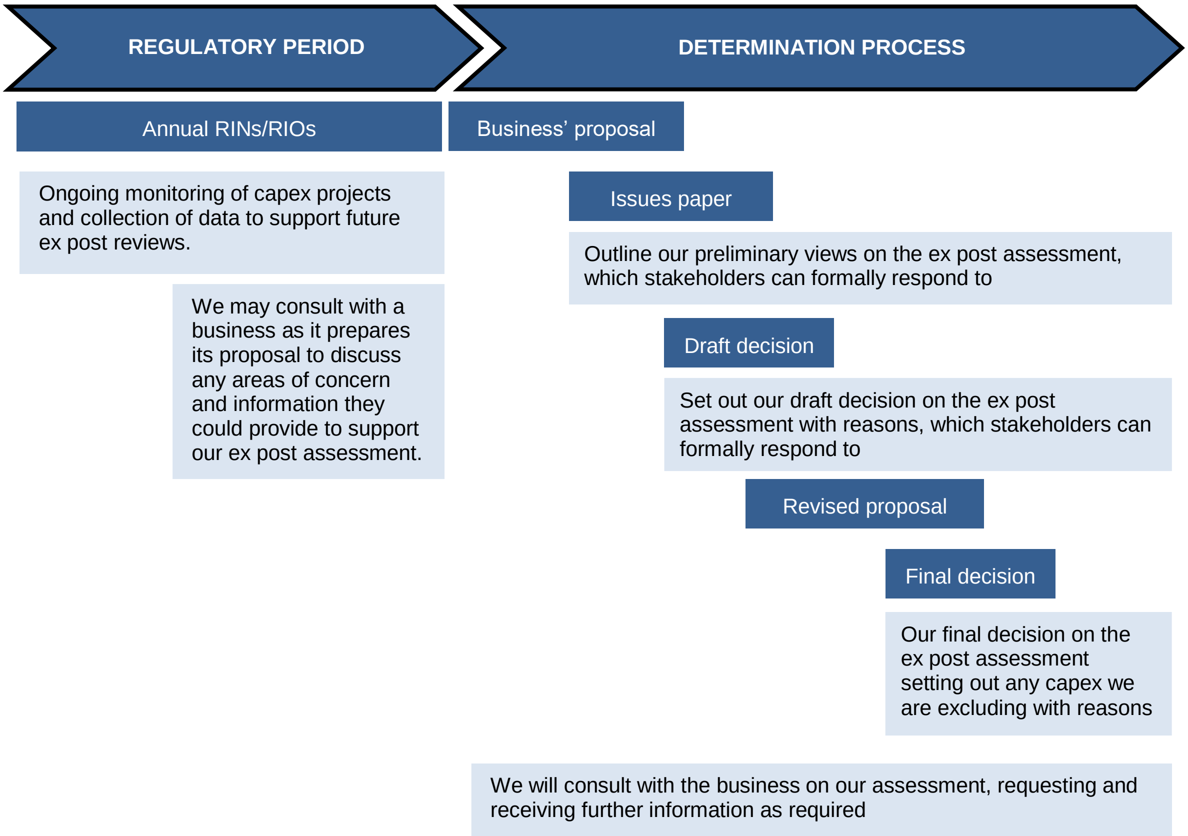
- whether the NSP's reasons for the capex overspend are justifiable
- whether there are any other reasons that mitigate the NSP's level of overspend
- whether the NSP has followed appropriate processes and procedures in undertaking its capex to ensure it spent only the efficient and prudent level of capex required.

Once we have undertaken this analysis (using a similar methodology to how it undertakes this analysis ex ante) we will form an opinion on what aspects of the NSP's capex are efficient and prudent and what aspects of the NSP's capex are not efficient and prudent.

4.3.3 Stage 1

We may consult with NSPs and assess data collected in RINs/RIOs and annual benchmarking reports during the period prior to the formal determination process to gather information for the ex post review. Following the NSP's submission of its regulatory proposal, we will outline our preliminary views on the ex post review in an issues paper published as part of the determination process. We will undertake the ex post review process and set out our decision in the draft determination. We will consult with NSPs at each stage of the process and stakeholders may respond to the issues paper and draft decision. Our final decision on the ex post review will be in our final determination. This process is outlined in Figure 2.

Figure 2 How the ex post review aligns with the determination process



4.4 Exclusion of capex from the RAB

There are three cases in which we may exclude capex from the RAB:

1. when a NSP has overspent, the amount of capex above the allowance that does not reasonably reflect the capital expenditure criteria can be excluded from the RAB
2. where there is an inflated related party margin, the inflated portion of the margin can be excluded from the RAB
3. where a change to a NSP's capitalisation policy has led to opex being capitalised, the capitalised opex can be excluded from the RAB.

Our decision on whether to exclude capex from the RAB will be informed by any assessment we undertake (e.g. ex post review) and other requirements of the NER. If we exclude any of the above categories of capex, this capex will not be included in the RAB for years 1, 2 and 3. For overspent capex in years 4 and 5, we will make the adjustment to the RAB one regulatory control period later. At this time we will take into account the amount of capex that was included in the RAB previously, and the NPV adjustment required to ensure the NSP does not retain any revenue through the RAB from capex that does not meet the capital expenditure criteria. We may also need to adjust the CESS as discussed in section 2.6 of this guideline.

We discuss the particular processes for assessing whether exclusions are required on the basis of a change to a NSP's capitalisation policy or for inflated related party margins below.

4.4.1 Capitalisation policy changes

This issue is only relevant where a NSP's incentives for capex and opex are not balanced. If the incentive power to undertake efficient capex is the same as the incentive power to undertake efficient opex it does not matter whether expenditure is classified as capex or opex. For example, assume a NSP is subject to a CESS and an EBSS, both lead to a power of 30 per cent. If a NSP capitalises opex it will benefit by 30 per cent through the EBSS but the 30 per cent penalty from the CESS offsets this. Hence, there will be no net difference and there is no need to consider whether a NSP has changed its capitalisation policy. In this scenario, we will roll into the RAB whatever the NSP has classified as capex at the time of the roll forward of the RAB (subject to this meeting other relevant requirements under the ex post review). Hence, our first consideration is whether the NSP's incentives for capex and opex are relatively balanced.

Where the incentives for opex and capex are not balanced, we will consider whether:

- a NSP has changed its capitalisation policy during the current regulatory control period, and
- whether opex has been reclassified as capex due to those changes.

To determine this, we will require the following information from NSPs as part of the regulatory determination process:

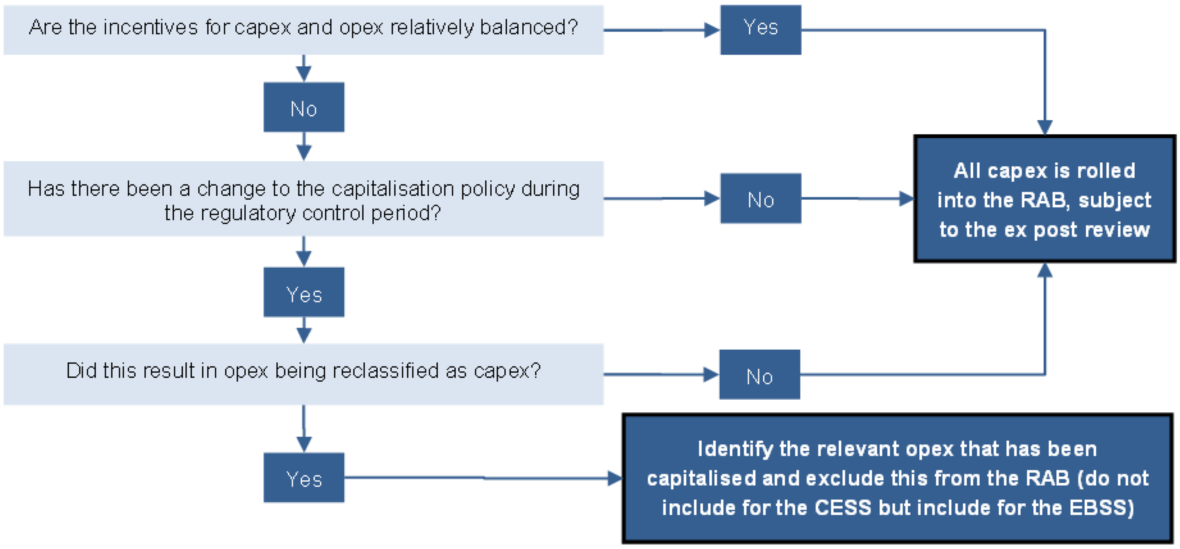
- details of any changes made to the NSP's capitalisation policy during the regulatory control period and the impact of these changes
- details of any opex that has been capitalised as a result of the changes to the capitalisation policy.

We may also require the NSP to provide details of its capitalisation of expenditure as part of the annual Regulatory Information Notice/Regulatory Information Order process, including a statement of its capitalisation policy with auditor's sign-off.

Where we identify that opex has been capitalised as a result of a change to the NSP's capitalisation policy (where the incentives for capex and opex are not balanced), we will exclude the corresponding expenditure from the RAB. For the purposes of calculating the payment due under the EBSS, this expenditure will count as opex. This process is shown in Figure 3.

In all other instances we will roll forward the RAB for the NSP's entire capex spend (subject to this meeting the relevant requirements under the ex post review).

Figure 3 Process for assessing capitalisation policy changes



4.4.2 Related party margins

This assessment is only relevant where a related party provides services to a NSP, and a cost margin is included in the contract.

When rolling forward the RAB, our decision on whether to accept a related party margin will depend on whether the contractual arrangements have changed during the regulatory control period.

If the contractual arrangement with the related party has not changed during the regulatory control period, then we will only allow into the RAB the related party margin we approved at the time of the determination.

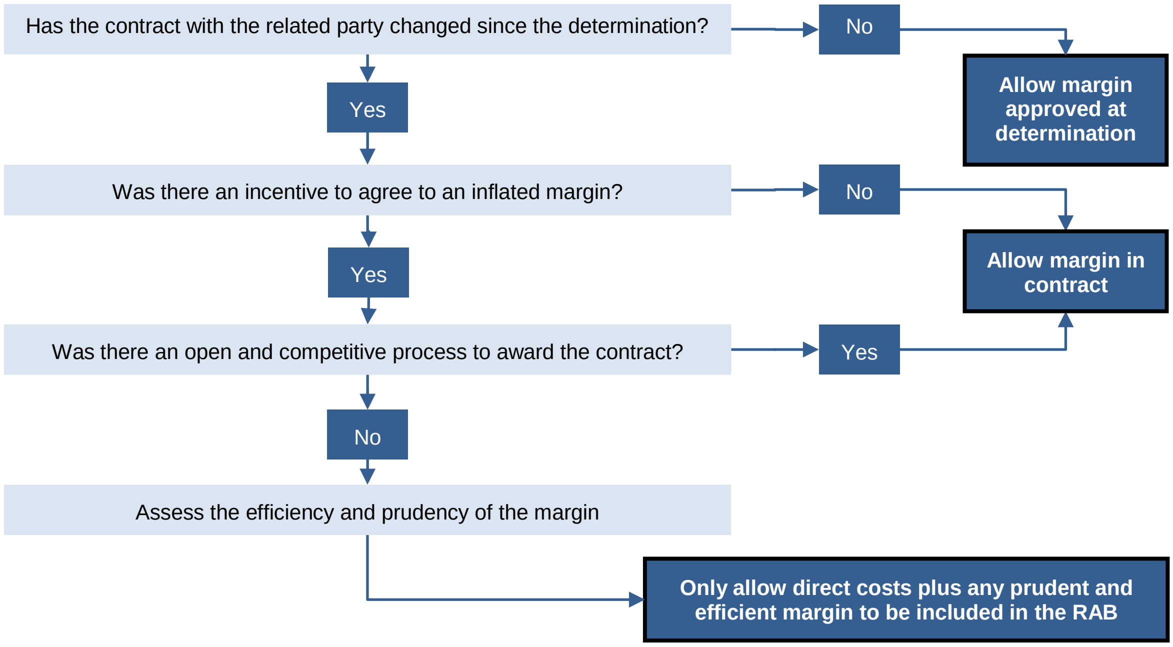
If the contractual arrangements have changed during the regulatory control period, we will undertake another assessment of the related party margin. This involves a two-stage process. The first stage is a 'presumption threshold' test in which we consider the following:

- Did the NSP have an incentive to agree to non-arm’s length terms when it negotiated the contract (or at its most recent re-negotiation)?
- If yes, did the NSP conduct a competitive open tender process in a competitive market?

If the answer to the first question is no or the answer to the second question is yes, the related party margin passes the presumption threshold. In these circumstances, we will assume that the contract price (including any associated margin above direct costs) reflects prudent and efficient costs, and we will roll the total contract price into the RAB.

Where the contractual arrangement fails the presumption threshold, we will consider whether the total contractual cost is prudent and efficient. We will only roll into the RAB the margin above the external provider's direct costs shown to be prudent and efficient by this assessment. We show this process in Figure 4.

Figure 4 Process for assessing related party margins



4.5 Ex post statement

As part of a regulatory determination for the regulatory control period just ended, we will make an ex post statement drawing on the ex post review process outlined above. It will coincide with the roll forward of the RAB undertaken as part of a regulatory determination.

The period for the ex post statement is the regulatory control period. This differs from the ex post exclusion period which covers years 1, 2 and 3 of the regulatory control period just ending and years 4 and 5 of the regulatory control period preceding that.

While we will use the same ex post review process for the ex post statement and the ex post exclusion assessment, it is likely that the process will be more detailed for the years in which the ex post exclusion provisions apply.

5 How these measures are consistent with the capital expenditure incentive objective

Under clauses 6.4A(b) and 6A.5A(b) the NER, this guideline must set out how the above schemes and proposals, both individually and taken together, are consistent with the 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.

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

- the efficient costs of achieving the capital expenditure objectives
- the costs that a prudent NSP would require to achieve the capital expenditure objectives
- a realistic expectation of the demand forecast, cost inputs and other relevant inputs required to achieve the 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;
>
> 4) maintain the reliability, safety and security of the distribution system through the supply of standard control services; and
>
> 5) contribute to achieving emissions reduction targets through the supply of standard control services.

A discussion of how the measures outlined in this guideline, both individually and taken together, are consistent with the capital expenditure incentive objective, is provided below.

5.1 The Capital Expenditure Sharing Scheme

The CESS provides NSPs with an ex ante incentive to spend only efficient and prudent capex. The CESS rewards NSPs that make efficiency gains. Conversely, the CESS penalises NSPs that make efficiency losses. In this way, NSPs will be more likely to incur only efficient capex when subject to a CESS. This should assist in ensuring that any capex included in the RAB reflects the capex criteria. In particular, if a NSP is subject to the CESS, its capex is more likely to be efficient and will reflect the costs of a prudent NSP.

5.2 Depreciation

If a NSP is already subject to the CESS and there is no evidence of persistent overspending or inefficiency, we will use forecast depreciation to roll forward the RAB. Alongside the operation of the CESS, this will ensure that a NSP faces clear and equal incentives for efficient and prudent capex irrespective of the type of asset and when the capex occurs.

Where a CESS does not apply, or stronger incentives are required, using actual depreciation to roll forward the RAB would strengthen a NSP's incentives for efficient and prudent capex. In both scenarios a NSP will have incentives to ensure their capex is efficient and reflects the costs that a prudent NSP would incur.

5.3 Ex post statement and exclusions from the RAB

Our ability to exclude capex from the RAB ex post is central to the capital expenditure incentive objective. In particular, we will be able to assess whether capex overspends have met the relevant capital expenditure criteria. If not, we can exclude these costs from the RAB. In addition, the ability to exclude inflated related party margins and capitalised opex will ensure that consumers do not pay for these costs where they do not reflect the capital expenditure criteria.

5.4 Depreciation

The application of the CESS alongside forecast depreciation will provide NSPs with clear ex ante incentives to ensure they spend only efficient and prudent capex. Where these measures are not sufficient, we may choose to strengthen the ex ante incentives by using actual depreciation to roll forward the RAB. In this way we have a number of tools we can apply ex ante to incentivise efficient capex.

The ex post measures outlined in this guideline complements the ex ante measures. In particular, if a NSP has not responded to the ex ante incentives, we will still have the ability to review the NSP's actual capex. Where a NSP has overspent, we can exclude the overspend from the RAB where it does not meet the capital expenditure criteria.

In this way, this guideline provides a suite of measures to incentivise NSPs to undertake only efficient and prudent capex. Individually, and collectively, these are consistent with the capital expenditure incentive objective.

Glossary

Term	Definition
AER	Australian Energy Regulator
augex	Augmentation expenditure
capex	Capital expenditure
CESS	Capital Expenditure Sharing Scheme
EBSS	Efficiency Benefit Sharing Scheme
guideline	Capital Expenditure Incentive Guideline
NER	The National Electricity Rules as defined in the National Electricity Law.
NSP	Network Service Provider
opex	Operating expenditure
RAB	Regulatory asset base
repex	Replacement expenditure
RIN	Regulatory Information Notice
RIO	Regulatory Information Order
RIT-D	Regulatory Investment Test - Distribution
RIT-T	Regulatory Investment Test - Transmission
WACC	Weighted Average Cost of Capital

Appendix A: Capital expenditure sharing scheme example 20% underspend

This appendix provides a worked example of how the CESS would work where a network has underspent 20% of its $500 million capex allowance. Numbers other than percentages are in millions of dollars.

Real Discount rate:	3.0%				
Nominal Discount rate:	5.6%				
Year	1	2	3	4	5
Capex allowance	100	100	100	100	100
Actual capex	80	90	90	70	70
Underspend	20	10	10	30	30
Year 1 benefit		0.59	0.61	0.62	0.64
Year 2 benefit			0.28	0.29	0.30
Year 3 benefit				0.29	0.30
Year 4 benefit					0.98
Year 5 benefit					
Total financing benefit	0.00	0.59	0.89	1.21	2.21
Discount factor (end of year)	1.24	1.18	1.11	1.06	1.00
NPV underspend	24.56	11.14	10.82	34.45	33.45
NPV financing benefit	0.00	0.70	0.99	1.27	2.21

Total underspend (NPV)	114.43
Relevant sharing ratio for overspend or 10% underspend	30%
Relevant sharing ratio for portion greater than 10% underspend	20%
Weighted average sharing ratio	25%
Customer share	85.82
NSP share	28.61
Total NSP financing benefit (NPV)	5.18
CESS benefit	23.43

Appendix B: Capital expenditure sharing scheme example 10% underspend

This appendix provides a worked example of how the CESS would work where a network has underspent 10% of its $500 million capex allowance. Numbers other than percentages are in millions of dollars.

Real Discount rate:	3.0%				
Nominal Discount rate:	5.6%				
Year	1	2	3	4	5
Capex allowance	100	100	100	100	100
Actual capex	90	90	90	90	90
Underspend	10	10	10	10	10
Year 1 benefit		0.28	0.28	0.29	0.30
Year 2 benefit			0.28	0.29	0.30
Year 3 benefit				0.29	0.30
Year 4 benefit					0.30
Year 5 benefit					
Total financing benefit	0.00	0.28	0.57	0.87	1.19
Discount factor (end of year)	1.24	1.18	1.11	1.06	1.00
NPV underspend	11.48	11.14	10.82	10.50	10.20
NPV financing benefit	0.00	0.33	0.63	0.92	1.19

Total underspend (NPV)	54.15
Relevant sharing ratio for overspend or 10% underspend	30%
Relevant sharing ratio for portion greater than 10% underspend	20%
Weighted average sharing ratio	30%
Customer share	37.90
NSP share	16.24
Total NSP financing benefit (NPV)	3.08
CESS benefit	13.17