Preliminary Framework and Approach Powerlink

Regulatory control period commencing 1 July 2022

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AUSTRALIAN ENERGY REGULATOR

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About the framework and approach paper

The Australian Energy Regulator (AER) is responsible for the economic regulation of electricity transmission and distribution services in Australia's national electricity market. We are an independent statutory authority established by the Australian Government. Our powers and functions are set out in the National Electricity Law (NEL) and the National Electricity Rules (NER).

This preliminary Framework and Approach (F&A) paper is the first step in the process to determine efficient prices for Powerlink's electricity transmission service business in Queensland. Following consultation on this preliminary F&A paper, we will publish a final F&A paper setting out our proposed approach to the economic regulation of Powerlink's Queensland transmission revenues for the forthcoming regulatory control period. The final F&A paper will set out, amongst other things, the application of any incentive schemes. The F&A also facilitates early consultation with consumers and other stakeholders and will assist Powerlink to prepare expenditure proposals.

Powerlink is a licensed, regulated operator of the monopoly high voltage electricity transmission network in Queensland. The network comprises the poles, wires and transformers used for transporting high voltage electricity from remote generators to population centres. Powerlink designs, constructs, operates and maintains the transmission network for Queensland electricity consumers. The current five-year 2017–22 regulatory control period concludes on 30 June 2022. Our F&A paper for the forthcoming five-year 2022–27 regulatory control period must be published by 31 July 2020.[1]

This preliminary F&A paper sets out our proposed approach for the 2022–27 regulatory control period concerning the application of the following:

- service target performance incentive scheme (STPIS)
- efficiency benefit sharing scheme (EBSS)
- capital expenditure sharing scheme (CESS)
- expenditure forecast assessment guidelines
- demand management innovation allowance mechanism (DMIAM)
- whether depreciation will be based on forecast or actual capital expenditure (capex) in updating the regulatory asset base (RAB).

Following the release of the final F&A paper, Powerlink must submit a revenue proposal by 31 January 2021 for its next regulatory control period commencing on 1 July 2022.

Table 1 summarises the transmission determination process.

1 NER, cl. 6A.10.1A(a)(i) and (e).

Table 1 Powerlink's 2022–27 transmission determination process

Step	Date
AER publishes preliminary F&A	21 February 2020
Submissions on preliminary F&A close	30 March 2020
AER publishes final F&A	31 July 2020
Powerlink submits regulatory proposal to AER	31 January 2021
AER publishes issues paper	March 2021*
AER holds public forum	April 2021*
Submissions on regulatory proposal close	May 2021*
AER publishes draft transmission determination for Powerlink	September 2021*
AER holds a predetermination conference	October 2021*
Powerlink submits revised regulatory proposal to AER	November 2021
Submissions on draft determination and revised proposal close	December 2021*
AER publishes final transmission determination for Powerlink	30 April 2022

Source: NER, Chapter 6A, Part E.

Notes: * The dates provided are based on the AER receiving compliant proposals. These dates may alter if the AER receives non-compliant proposals. The NER also does not provide specific timeframes in relation to publishing draft decisions.

Contents

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Capex	Capital expenditure
CESS	Capital expenditure sharing scheme
DMIAM	Demand management innovation allowance mechanism
DNSP	Distribution network service provider
EBSS	Efficiency benefit sharing scheme
ENA	Energy Networks Australia
F&A	Framework and approach
MAR	Maximum allowed revenue
MIC	Market impact component
NCC	Network capability component
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
Opex	Operating expenditure
RAB	Regulatory asset base
RIN	Regulatory information notice
SSIS	Small-scale incentive scheme
STPIS	Service target performance incentive scheme
TNSP	Transmission network service provider

1 Overview

This preliminary F&A paper sets out how we propose to apply a range of incentive schemes and other guidelines to Powerlink as well as our approach to calculating depreciation. The positions we set out in this paper are not binding on the AER or Powerlink.[2]

Incentive schemes encourage transmission network service providers (TNSPs) to manage their businesses in a safe, reliable manner that benefits the long term interests of consumers. The schemes also provide TNSPs with incentives to spend efficiently and to meet or exceed service quality/reliability targets. In some instances, TNSPs may incur a financial penalty if they fail to meet set targets. The overall objectives of the schemes are to:

- encourage appropriate levels of service quality
- maintain network reliability as appropriate
- incentivise TNSPs to spend efficiently on capital and operating expenditure (capex/opex)
- share efficiency gains and losses between TNSPs and consumers
- incentivise TNSPs to consider economically efficient alternatives to augmenting their networks.

We summarise the specific schemes below and provide an overview of our expenditure forecast assessment guideline and approach to calculating depreciation.

Service target performance incentive scheme

The service target performance incentive scheme (STPIS) provides a financial incentive to TNSPs to maintain and improve service performance. The STPIS aims to safeguard service quality for customers that may otherwise be affected as TNSPs seek out cost efficiencies. We propose to apply version 5 of the STPIS to Powerlink for its 2022–27 regulatory control period.[3]

Efficiency benefit sharing scheme

The efficiency benefit sharing scheme (EBSS) aims to provide a continuous incentive for TNSPs to pursue efficiency improvements in opex, and provide for a fair sharing of these efficiencies between TNSPs and network users. Consumers benefit from improved efficiencies through lower regulated prices in the future. We propose to apply version 2 of the EBSS to Powerlink for its 2022–27 regulatory control period.[4]

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2 NER, cl. 6A.10.1A(f).

3 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015. STPIS version 5 is available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment.

4 AER, *Efficiency benefit sharing scheme*, 29 November 2013. EBSS version 2 is available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/efficiency-benefit-sharing-scheme-ebss-%E2%80%93-november-2013.

Capital expenditure sharing scheme

The capital expenditure sharing scheme (CESS) provides financial rewards to TNSPs whose capex becomes more efficient, and financial penalties for TNSPs whose capex become less efficient. Consumers benefit from improved efficiency through lower regulated prices in the future. We propose to apply version 1 of the CESS to Powerlink for its 2022–27 regulatory control period.[5]

Small-scale incentive scheme

The NER provide that we may develop small-scale incentive schemes (SSIS).[6] The AER is currently considering whether to make an electricity distribution small scale incentive scheme for customer service, referred to as the customer service incentive scheme (CSIS). The scheme would reward electricity distribution network service providers (DNSPs) for improving their customer service, or penalise them if service deteriorates. Powerlink has not proposed a detailed incentive design developed in conjunction with its customers. As such, we do not propose to apply a SSIC to Powerlink.

Demand management incentive scheme / Demand management innovation allowance mechanism

The Demand Management Incentive Scheme (DMIS) provides the service operator with financial payments to implement efficient non-network options which are expected to lower costs to consumers. The Demand Management Innovation Allowance Mechanism (DMIAM) provides the service provider with funding to research and develop demand management projects that have the potential to reduce long term network costs.

On 5 December 2019, the Australian Energy Market Commission (AEMC) published its final determination for a rule change to apply the DMIAM, and not the DMIS, to TNSPs.[7] The AER must develop and publish the first transmission DMIAM under the NER by 31 March 2021.[8] We note this date is two months after Powerlink's (initial) regulatory proposal is due to be submitted to the AER.

At this stage, we expect to develop and apply a DMIAM to Powerlink for the 2022–27 regulatory control period in our final determination.

Expenditure forecast assessment guideline

The expenditure forecast assessment guideline is based on a nationally consistent reporting framework allowing us to compare the relative efficiencies of TNSPs and decide on efficient

5 AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013. CESS version 1 is available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-incentives-guideline-2013/final-decision.

6 NER, cl. 6A.7.5.

7 AEMC, Demand management incentive scheme and innovation allowance for TNSPs, Rule determination, 5 December 2019.

8 NER, cl. 11.[118].2.

expenditure allowances. Our proposed approach is to apply the guideline, including the information requirements, to Powerlink for its 2022–27 regulatory control period.[9]

The guideline outlines a suite of assessment/analytical tools and techniques to assist our review of Powerlink's revenue proposal. We intend to apply the assessment techniques set out in the guideline to Powerlink's revenue proposal.

Depreciation

As part of the roll forward methodology, when a TNSP's regulatory asset base (RAB) is updated from forecast capex to actual capex at the end of a regulatory period, it is also adjusted for depreciation. The depreciation we use to roll forward the RAB can be based on either actual capex incurred during the regulatory control period, or the capex allowance forecast at the start of the regulatory control period. The choice of depreciation approach is one part of the overall capex incentive framework.

We propose to use forecast depreciation to establish the RAB for the subsequent 2027–32 regulatory control period commencing on 1 July 2027 for Powerlink.

Further details of our proposed approach and reasons for each aspect of the F&A are set out below.

2 Service target performance incentive scheme

This section sets out our proposed approach and reasons on how we intend to apply the STPIS[10] to Powerlink in the 2022–27 regulatory control period.

The AER creates, administers and maintains the STPIS in accordance with the requirements of the NER. The purpose of the STPIS is to provide incentives to TNSPs to provide greater transmission network reliability when network users place greatest value on reliability, and improve and maintain the reliability of the elements of the transmission network most important to determining spot prices.[11] Version 5 of the STPIS can result in a maximum revenue increment or decrement of up to 3.75 per cent of the TNSP's maximum allowable revenue (MAR).[12]

9 We are continuously improving the economic benchmarking techniques that are captured in our Guideline. This includes reviewing and refining our analysis of operating environment factors. See section 6 for more detail.

10 AER, *Electricity transmission network service provider service target performance incentive scheme*, version 5 (corrected) October 2015.

11 NER, cl. 6A.7.4(b)(1).

12 AER, *Electricity transmission network service provider service target performance incentive scheme*, version 5 (corrected) October 2015. Calculated as Service Component: max +/-1.25% MAR, Market Impact Component: max +/-1.00% MAR, and Network Capability Component: max +/-1.5% MAR, max decrement depends on allowance and number of projects not completed and their project range as per cll. 5.3(b)-(c).

The STPIS works as part of the building block determination.[13] As part of the revenue determination, we make a decision on the application of the STPIS to a TNSP for the regulatory control period as well as the values associated with the applicable STPIS parameters.[14] In each regulatory year, the TNSP's MAR is adjusted based on its performance against the STPIS parameters in the previous calendar year.

The STPIS is part of an incentive based regulation structure we use across all the electricity transmission networks we regulate. The incentives provided by the CESS and EBSS are balanced with the incentive to improve service standards provided by the STPIS.

The STPIS must:

- provide incentives for each TNSP to:[15]
    - provide greater reliability of the transmission system that is owned, controlled or operated by it at all times when transmission network users place the greatest value on the reliability of the transmission system
    - improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices
- result in a potential adjustment to the revenue the TNSP may earn, from the provision of prescribed transmission services, in each regulatory year to which the STPIS applies
- ensure that the maximum revenue increment or decrement as a result of the operation of the STPIS will fall within a range that is between one per cent and five per cent of the MAR for the relevant regulatory year
- take into account the regulatory obligations or requirements with which TNSPs must comply
- take into account any other incentives provided for in the rules that create incentives for TNSPs to minimise capital or operating expenditure; and
- take into account the age and ratings of the assets comprising the relevant transmission system.

In developing the STPIS we had regard to the requirements of the NER, as set out in our final decision on the STPIS published in September 2015.[16] Under an incentive based regulation framework, TNSPs have an incentive to reduce costs. Cost reductions are beneficial to TNSPs and customers where service performance is maintained or improved. However, cost efficiencies achieved at the expense of service performance standards are not desirable. Version 5 of the STPIS seeks to ensure that increased financial efficiency does not result in deterioration of service performance for customers.

13 NER, cll. 6A.5.4(a)(5) and 6A.5.4(b)(5).

14 NER, cll. 6A.4.2(5) and 6A.14.1(1)(iii).

15 NER, cl. 6A.7.4(b).

16 AER, *Electricity transmission network service* provider s*ervice target performance incentive scheme*, version 5 (corrected) October 2015.

2.1 Proposed approach

We propose to apply version 5 of the STPIS Powerlink for the 2022–27 regulatory control period as follows:

- the parameters for each service component and the maximum revenue increment or decrement that Powerlink can receive for a given level of performance will be those prescribed in version 5 of the scheme. The applicable parameter values will be set out in Powerlink's transmission determination. Powerlink's MAR will be adjusted according to its performance against these parameter values, as assessed by us, in accordance with the scheme
- the MIC annual performance target[17] will be calculated in accordance with Appendix C and example 2 in Appendix F of the scheme[18]
- the network capability component of version 5 of the scheme will apply to Powerlink.

In its revenue proposal, Powerlink must:

- submit proposed values for the service component parameters[19]
- submit data for its market impact component for the preceding seven regulatory years.[20] Powerlink must submit a proposed value for a performance target, unplanned outage event limit and dollar per dispatch interval incentive.[21]
- submit a network capability incentive parameter action plan.[22]

We will accept Powerlink's proposed parameter values for the service, market impact and network capability components if the proposed values comply with STPIS version 5 clauses 3.2, 4.2 and 5.2 respectively.[23]

2.2 Reasons for proposed approach

We consider application of version 5 of the STPIS will provide appropriate incentives for Powerlink to:

17 The market impact parameter is the number of dispatch intervals where an outage on the TNSP's prescribed transmission network results in a network outage constraint with a marginal value greater than $10/MWh. For more information see AER, *Service target performance incentive scheme*, September 2015 (updated October 2015), Appendix C.

18 AER, Electricity transmission network service provider s*ervice target performance incentive scheme*, version 5 (corrected) October 2015, cl. 4.2(g) and Appendix F.

19 AER, *Electricity transmission network service* provider s*ervice target performance incentive scheme*, version 5 (corrected) October 2015. cl. 3.2.

20 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 4.2(a).

21 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 4.2(b).

22 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 5.2(b).

23 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015.

- provide greater transmission system reliability
- improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices
- undertake relevant low cost projects to promote efficient levels of network capability from existing assets.

Service component

The service component of the STPIS incentivises TNSPs to maintain and improve network availability and reliability by measuring performance against certain parameters. Under this component of the scheme, a TNSP can receive a revenue increment or decrement of up to 1.25 per cent of its MAR for the relevant calendar year.[24]

A TNSP receives a financial incentive (reward) in proportion to the extent its annual performance exceeds its performance target (calculated as the s-factor). If the TNSP fails to meet its performance target, it incurs a financial penalty in proportion to the extent its annual performance does not meet the performance target.

Version 5 of the STPIS amended the service component parameters to focus more on unplanned outages, including a new parameter focusing on proper operation of equipment. Performance against these parameters can be used as a lead indicator of a deterioration of network reliability.[25]

The scheme contains definitions for each parameter. The definitions specify the applicable sub-parameters, unit of measure, source of performance data, the formula for measuring performance, definitions of relevant terms, inclusions (which specify particular equipment or events which are to be measured) and exclusions.

We will assess whether Powerlink's proposed performance targets, caps and weightings comply with the version 5 STPIS requirements.[26]

We must accept Powerlink's proposed parameter values if they comply with the requirements of the STPIS.[27] We may reject them if they are inconsistent with the objectives of the STPIS.[28]

Market impact component

The market impact component will be applied to Powerlink to incentivise it to minimise the impact of its transmission outages that can affect National Electricity Market (NEM) outcomes.

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24 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 3.3(a)

25 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, pp. 7–8.

26 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 3.1.

27 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 3.2(a).

28 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 3.2(l).

In this component, Powerlink will receive a financial incentive which falls within a range of minus one percent (penalty) and plus one per cent (reward) of its maximum allowed revenue.[29]

We will assess Powerlink's proposed parameter values using the methodology set out in section 4, Appendix C and Appendix F of version 5 of the STPIS.

Network capability component

The network capability component will be applied to Powerlink to incentivise the identification and implementation of low cost one-off projects that will improve the capability of the transmission network at times most needed. The Australian Energy Market Operator (AEMO) will play a part in prioritising the projects to deliver best value for money for customers.

In this component, Powerlink will receive an annual allowance of up to a total of 1.5 per cent of MAR, but we may reduce the final payment where priority projects are not achieved.[30]

We will assess Powerlink's network capability incentive parameter action plan in accordance with section 5.2 of version 5 of the STPIS.

3 Efficiency benefit sharing scheme

The EBSS is intended to provide a continuous incentive for transmission businesses to pursue efficiency improvements in opex, and provide for a fair sharing of these between businesses and consumers. Consumers benefit from improved efficiencies through lower network prices in future regulatory control periods.

This section sets out our preliminary position and reasons on how we intend to apply the EBSS to Powerlink in the 2022–27 regulatory control period. We also explain the rationale underpinning the scheme and how applying the EBSS relates to our proposed approach to opex forecasting and benchmarking.

3.1 AER's preliminary position

We intend to apply the EBSS to Powerlink in the 2022–27 regulatory control period if we are satisfied the scheme will fairly share efficiency gains and losses between the business and consumers.[31] This will occur only if the opex forecast for the following period is based on Powerlink's revealed costs. Our transmission determination for Powerlink for the 2022–27 regulatory control period will specify if, and how, we will apply the EBSS.[32]

29 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cl. 4.3.

30 AER, *Electricity transmission network service provider service target performance incentive scheme*, *version 5 (corrected)* October 2015, cll. 5.3(b)-(c).

31 NER, cl. 6A.6.5(a).

32 AER, *Efficiency benefit sharing scheme*, 29 November 2013.

3.2 AER's assessment approach

The EBSS must provide for a fair sharing of opex efficiency gains and efficiency losses between a network service provider and network users.[33] We must also have regard to the following factors in developing and implementing the EBSS:[34]

- the need to ensure that benefits to electricity consumers likely to result from the scheme are sufficient to warrant any reward or penalty under the scheme
- the need to provide service providers with a continuous incentive to reduce opex
- the desirability of both rewarding service providers for efficiency gains and penalising service providers for efficiency losses
- any incentives that service providers may have to capitalise expenditure
- the possible effects of the scheme on incentives for the implementation of non-network alternatives.

3.3 Reasons for AER's preliminary position

The EBSS applies to Powerlink in the current 2017–22 regulatory control period.[35]

The decision to apply the EBSS in the 2022–27 regulatory control period will depend on whether we expect to use Powerlink's revealed costs in the 2022–27 period to forecast opex in the subsequent 2027–32 period.

Why we would apply the EBSS

We will only apply the EBSS in the 2022–27 regulatory control period if we expect we will use a revealed cost forecasting approach to forecast opex for the 2027–32 regulatory control period. The EBSS is intrinsically linked to our revealed cost forecasting approach. This approach relies on identifying an efficient opex amount in the base year (the 'revealed costs' of the transmission business), which we use to develop a total opex forecast. When a business makes an incremental efficiency gain, it receives a reward through the EBSS, and consumers benefit through a lower revealed cost forecast for the subsequent period. This is how efficiency improvements are shared between consumers and the business.

Under a revealed cost approach without an EBSS, a transmission business has an incentive to spend more opex in the expected base year. Also, a transmission business has less incentive to reduce opex towards the end of the regulatory control period, where the benefit of any efficiency gain is retained for less time. If we use a revealed cost forecasting approach, we apply the EBSS because:

- it reduces the incentive for a transmission business to inflate opex in the expected base year in order to gain a higher opex forecast for the next regulatory control period

33 NER, cl. 6A.6.5(a).

34 NER, cl. 6A.6.5(b).

35 AER, *Efficiency benefit sharing scheme*, 29 November 2013.

- it provides a continuous incentive for a transmission business to pursue efficiency improvements across the regulatory control period. This is because the EBSS allows a business to retain efficiency gains for a total of six years, regardless of the year in which it was made.

In implementing the EBSS, we also consider any incentives a transmission business may have to capitalise opex.[36] Where opex incentives are balanced with capex incentives, a transmission business does not have an incentive to favour opex over capex, or vice-versa. If the CESS and EBSS are both applied, these incentives will be relatively balanced. We discuss the CESS further in section 4.

Why we would not apply the EBSS

We will not apply the EBSS if it is likely we will *not* use a revealed cost forecasting approach to forecast opex for the 2027–32 regulatory control period.

If we apply the EBSS but do not forecast opex using revealed costs, a transmission business could in theory receive an EBSS reward for efficiency gains (at a cost to consumers), but consumers would not benefit through a lower revealed cost forecast. If the transmission business expects this, it has an incentive to increase its EBSS carryover by reducing its reported opex in the base year, knowing the opex reduction will not reduce its opex forecast in the following regulatory control period.[37] Consumers would pay the EBSS reward but not benefit from the opex reduction and would be worse off. This outcome is contrary to the NER which requires that the EBSS must provide for a fair sharing of efficiency gains and losses between a transmission business and consumers.[38]

If a transmission business's revealed costs in the 2017–22 regulatory control period are materially higher than the opex incurred by a benchmark efficient transmission business, we will be unlikely to use revealed costs to forecast opex for the 2022–27 regulatory control period. In which case, we will be unlikely to apply the EBSS. Where we allow forecast opex that is materially lower than revealed costs, even in the absence of the EBSS the TNSP would have an incentive to reduce opex and therefore may have an incentive to capitalise expenditure it would have previously expensed. Given these incentives to reduce opex (and therefore to substitute opex with capex), we consider that applying the CESS would likely provide more balanced incentives between incurring capex and opex than not applying the CESS.[39] We discuss the CESS further in section 4.

For a detailed example of how the EBSS works with a revealed cost forecasting approach, see appendix A of the explanatory statement to the EBSS.[40]

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36 NER, cl. 6A.6.5(b)(3).

37 In our explanatory statement to the EBSS, we detail why excluding the expenditure categories not forecast using a single year revealed cost forecasting method is in the best interest of network users. AER, *Explanatory statement - efficiency benefit sharing scheme*, November 2013, pp. 18–19.

38 NER, cl.6A.6.5(a).

39 For example, we chose to apply the CESS and not the EBSS to Northern Territory electricity distributor, Power and Water in its 2019–24 distribution determination. https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/power-and-water-corporation-determination-2019-24/draft-decision.

40 AER, *Explanatory statement – Efficiency benefit sharing scheme,* November 2013, pp. 25–26. https://www.aer.gov.au/system/files/AERexplanatorystatement-efficiencybenefitsharingschemeNovember2013.docx.

4 Capital expenditure sharing scheme

The CESS applies to Powerlink in the current 2017–22 regulatory control period.[41]

The CESS provides financial rewards to TNSPs whose capex becomes more efficient, and financial penalties to TNSPs whose capex becomes less efficient. Consumers benefit from improved efficiency through lower regulated prices. The CESS approximates efficiency gains and efficiency losses by calculating the difference between forecast and actual capex. It shares these gains or losses between TNSPs and network users.

The CESS works as follows:

- we calculate the cumulative underspend or overspend for the current regulatory control period in net present value terms
- we apply the sharing ratio of 30 per cent to the cumulative underspend or overspend to work out the TNSP's share of the underspend or overspend
- CESS payments are calculated taking into account the financing benefit or cost to the TNSP of the underspend or overspend.[42] Further adjustments can also be made to account for deferral of capex and ex post exclusions of capex from the RAB; and
- CESS payments are added or subtracted to the TNSP's regulated revenue as a separate building block in the next regulatory control period.

Under the CESS, a TNSP retains 30 per cent of an underspend or overspend, while consumers retain the other 70 per cent. This means that for every one dollar saving in capex, the TNSP keeps 30 cents while consumers gain 70 cents.

4.1 Proposed approach

We propose to apply the CESS as set out in our capex incentives guideline to Powerlink in its 2022–27 regulatory control period.[43]

In deciding on whether to apply the CESS to a TNSP, including the nature and details of the applied CESS, we must:[44]

- make that decision in a manner that contributes to the capex incentive objective;[45] and
- consider the CESS principles,[46] capex objectives,[47] other incentive schemes, and (where relevant) the opex objectives, as they apply to the particular TNSP, and the circumstances of the TNSP.

41 AER, Capital expenditure sharing scheme, November 2013.

42 We calculate benefits as the benefits to the TNSP of financing the underspend since the amount of the underspend can be put to some other income generating use during the period. Losses are similarly calculated as the financing cost to the TNSP of the overspend.

43 AER, Capital expenditure incentive guideline for electricity network service providers, November 2013, pp. 5–9.

44 NER, cl. 6A.6.5A.

45 NER, cll. 6A.5A(a) and 6A.6.7(c)(1)-(3).

46 NER, cl. 6A.6.5A(c).

47 NER, cl. 6A.6.7(a).

Broadly, the capex incentive objective is to ensure that only capex that meets the capex criteria enters the RAB (where the RAB is used to set prices). Consumers therefore only fund capex that is efficient and prudent.

4.2 Reasons for proposed approach

We propose the CESS continues to apply to Powerlink in the 2022–27 regulatory control period. We consider this will contribute to the capex incentive objective.[48]

In developing the CESS, we took into account the capex incentive objective, capex criteria, capex objectives and the CESS principles. The CESS is designed to work alongside other incentive schemes that apply to TNSPs, including the EBSS and STPIS.

If a TNSP spends less than its approved forecast capex during a regulatory control period, that TNSP will benefit within that regulatory period. At the end of the regulatory period, the TNSP's RAB will be updated to include new capex. The RAB will include a lower capex amount than would have been the case if the TNSP had spent the full forecast capex amount. This is where any sharing of capex underspends (or overspends) with consumers occurs. Thus consumers will also benefit from a capex underspend but this will occur at the end of the regulatory control period as the result of lower future prices.

As the end of the regulatory control period approaches, the time available for the TNSP to retain any savings gets shorter. The earlier in the regulatory control period that a TNSP incurs an underspend, the greater is its reward. Without a CESS, the TNSP may choose to spend earlier on capex, spend less on capex (at the expense of service quality), or displace opex with capex. The TNSP may make these choices when it is not efficient to do so. The CESS maintains the TNSP's incentive to spend less than its forecast capex as the TNSP approaches the end of its regulatory period.

The CESS means the TNSP faces the same reward and penalty for capex underspends or overspends in every year of the regulatory control period. The CESS provides TNSPs with an ex ante incentive to spend only efficient capex. TNSPs that make efficiency gains will be rewarded through the CESS. Conversely, TNSPs that make efficiency losses will be penalised through the CESS. In this way, TNSPs will be more likely to incur only efficient capex when subject to a CESS, increasing the likelihood that capex included in the TNSP's RAB reflects the capex criteria. Specifically, if a TNSP is subject to the CESS, its capex is more likely to be efficient and to reflect the costs of a prudent TNSP.

When the CESS, EBSS and STPIS apply to a TNSP, the incentives for improvements in opex, capex and service outcomes are balanced. This encourages businesses to make efficient decisions concerning when and what type of expenditure to incur. Businesses are incentivised to efficiently balance expenditure reductions against service quality and reliability.

48 NER, cll. 6A.5A(a) and 6A.6.7(c).

5 Small-scale incentive scheme

The NER provide that we may develop small-scale incentive schemes.[49] The AER is currently considering whether to make an electricity distribution SSIC for customer service (CSIS). The scheme would reward DNSPs for improving their customer service, or penalise them if service deteriorates. We consider that this could improve the incentives available for DNSPs to recognise the value of customer service.

The relationship between TNSPs and their customers may be different to the relationship DNSPs have with their customers. As such, the development of a transmission CSIS warrants its own, separate consultation. Powerlink has not proposed a detailed incentive design developed in conjunction with its customers. As such, we do not propose to apply a SSIC to Powerlink.

6 Demand management incentive scheme / Demand management innovation allowance mechanism

On 1 March 2019, Energy Networks Australia (ENA) submitted a rule change request proposing amendments to the NER that would require the AER to develop a demand management incentive scheme (DMIS) and demand management innovation allowance mechanism (DMIAM) to apply to TNSPs.[50]

On 5 December 2019, the AEMC published its rule determination to apply the DMIAM, and not the DMIS, to TNSPs.[51]

Introducing a DMIAM for transmission is expected to encourage transmission businesses to expand and share their knowledge and understanding of innovative demand management projects that may reduce long term network costs and, consequently, lower prices for consumers. The AEMC was not satisfied that the benefits of applying the DMIS to transmission businesses would outweigh the upfront costs to consumers.[52]

The AER must develop and publish, by 31 March 2021, the first DMIAM required under new clause 6A.7.6.[53] The development of a DMIAM guideline will involve a process of consultation with our stakeholders.[54] We expect to develop and apply a DMIAM to Powerlink for the 2022–27 regulatory control period in our final determination.

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49 NER, cl. 6A.7.5.

50 AEMC, Demand management incentive scheme and innovation allowance for TNSPs, Rule determination, 5 December 2019.

51 AEMC, Demand management incentive scheme and innovation allowance for TNSPs, Rule determination, 5 December 2019.

52 AEMC, Demand management incentive scheme and innovation allowance for TNSPs, Rule determination, 5 December 2019.

53 AEMC, Demand management incentive scheme and innovation allowance for TNSPs, Rule determination, 5 December 2019, NER cl. 11.118.2.

54 The AER is required to follow the transmission consultation procedures in making, developing or amending guidelines, models or schemes or in reviewing methodologies. These procedures are set out in Part H of Chapter 6A of the NER, cl. 6A.20.

7 Expenditure forecast assessment guideline

The expenditure forecast assessment guideline sets out our expenditure forecast assessment approach as developed, and consulted upon, during the Better Regulation program.[55] It outlines the assessment techniques we will use to assess a transmission business's proposed expenditure forecasts, and the information we require from the business. This section sets out our intention to apply the guideline to Powerlink for the 2022−27 regulatory control period.

The guideline uses a nationally consistent reporting framework that allows us to compare the relative efficiencies of transmission businesses and decide on efficient expenditure forecasts. The NER requires Powerlink to advise us of the methodology they propose to use to prepare their forecasts by 30 June 2020.[56]

In the final F&A, we must set out our proposed approach to application of the guideline.[57] This will provide Powerlink with clarity regarding the information they should include in their revenue proposal. This contributes to an open and transparent process and makes our assessment of expenditure forecasts more predictable.

The guideline contains a suite of assessment/analytical tools and techniques to assist our review of the expenditure forecasts that transmission businesses include in their regulatory proposals. We intend to have regard to the assessment tools set out in the guideline. The tool kit includes:

- models for assessing proposed replacement and augmentation capex
- benchmarking (including broad economic techniques and more specific analysis of expenditure categories)
- methodology, governance and policy reviews
- predictive modelling and trend analysis
- cost benefit analysis and detailed project reviews.[58]

We exercise judgement to determine the extent to which we use a particular technique to assess a regulatory proposal. We use the techniques we consider appropriate depending on the specific circumstances of the determination. The guideline is flexible and recognises that we may employ a range of different estimating techniques to assess an expenditure forecast. As such, some customisation of the data requirements contained in the guideline might be required. While we do not anticipate any such requirements at present, any data customisation issues would be addressed through the regulatory information notice (RIN) that we will issue to Powerlink for the next regulatory control period.

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55 We were required to develop the expenditure forecast assessment guideline under clauses 6.4.5 and 11.53.4 of the NER. We published the guideline on 29 November 2013. It can be located at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-forecast-assessment-guideline-2013.

56 NER, cl. 6A.10.1B.

57 NER, cl. 6A.10.1A(b)(5).

58 AER, *Explanatory statement: Expenditure assessment guideline for electricity transmission and distribution*, 29 November 2013.

8 Depreciation

As part of the roll forward methodology, when the RAB is updated from forecast capex to actual capex at the end of a regulatory control period, it is also adjusted for depreciation.

This section sets out our proposed approach to calculating depreciation when the RAB is rolled forward to the commencement of the 2027–32 regulatory control period.

The depreciation we use to roll forward the RAB can be based on either:

- actual capex incurred during the regulatory control period (actual depreciation). We roll forward the RAB based on actual capex less the depreciation on the actual capex incurred by the TNSP; or
- the capex allowance forecast at the start of the regulatory control period (forecast depreciation). We roll forward the RAB based on actual capex less the depreciation on the forecast capex approved for the regulatory control period.

The choice of depreciation approach is one part of the overall capex incentive framework.

Consumers benefit from improved business efficiencies through lower regulated prices. Where a CESS is applied, using forecast depreciation maintains the incentives for TNSPs to pursue capex efficiencies, whereas using actual depreciation would increase these incentives. There is more information on depreciation as part of the overall capex incentive framework in our capex incentives guideline.[59] In summary:

- 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. So, the TNSP will earn less revenue 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 by a greater amount than if forecast depreciation were used. Hence, the TNSP will earn greater revenue 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.

The incentive from using actual depreciation to roll forward the RAB also varies with the life of the asset. Using actual depreciation will provide a stronger incentive for the TNSP to underspend capex on shorter lived assets compared to longer lived assets as this will lead to a relatively larger increase in the RAB. Use of forecast depreciation, on the other hand, leads to the same incentive for capex regardless of asset lives. This is because using forecast depreciation does not affect the TNSP's incentive on capex as the TNSP does not lose the full cost of any overspend and is not able to keep all the benefits of any underspend. To this end, using forecast depreciation means the capex incentive is focussed on the return on capital.

59 AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 10–11.

8.1 Proposed approach

We must set out our proposed approach as to whether we will use actual or forecast depreciation to establish a TNSP's RAB at the commencement of the following regulatory control period.[60] Our decision must be consistent with the capex incentive objective.[61] We must have regard to:[62]

- any other incentives the service provider has to undertake efficient capex
- substitution possibilities between assets with different lives
- the extent of overspending and inefficient overspending relative to the allowed forecast
- the capex incentive guideline
- the capital expenditure factors.

Our approach 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 TNSP's past capex performance demonstrates evidence of persistent overspending or inefficiency, thus requiring a higher powered incentive.

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 outcomes
- the substitutability of assets of different asset lives.

8.2 Reasons for proposed approach

We propose to use the forecast depreciation approach to establish the RAB at the commencement of the 2027–32 regulatory control period for Powerlink.

The opening RAB at the commencement of the 2022–27 regulatory control period will be established using forecast depreciation, as stated in our previous determination that applies to Powerlink for the 2017–22 regulatory control period. The use of forecast depreciation to establish the opening RAB for the commencement of the 2027–32 regulatory control period therefore maintains the current approach. Powerlink is currently subject to version 1 of the CESS. We propose to continue to apply version 1 of the CESS in the 2022–27 regulatory control period as discussed in section 4 above.

We consider the incentive provided by the application of the CESS in combination with the use of forecast depreciation and our other ex post capex measures should be sufficient to

60 NER, cll S6A.2.2B and 6A.5A(b)(3).

61 NER, cl 6A.5A(b)(3).

62 NER, cl S6A.2.2B.

achieve the capex incentive objective.[63] This approach, in combination with the CESS, will provide a 30 per cent reward for capex underspends and 30 per cent penalty for capex overspends. This is consistent for all asset classes. In developing our capex incentives guideline, we considered this to be a sufficient incentive for a TNSP to achieve efficiency gains over the regulatory control period in most circumstances.

63 AER, Capital expenditure incentive guideline for electricity network service providers, November 2013, pp. 13–19 and pp. 20–21.