Framework and Approach TransGrid

Regulatory control period commencing 1 July 2023

July 2021

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 (NEM). We are an independent statutory authority established by the Australian Government. Our relevant powers and functions are set out in the National Electricity Law (NEL) and National Electricity Rules (NER).

The framework and approach (F&A) paper is the first step in the process to determine efficient prices for the supply of electricity transmission services by TransGrid in NSW and the ACT, for the 2023–28 regulatory control period starting 1 July 2023 to 30 June 2028. It facilitates early consultation with consumers and assists TransGrid in preparing its revenue proposal.

TransGrid operates and manages the high voltage electricity transmission network in NSW and the ACT, connecting generators, distributors and major end users. The network comprises the poles, wires and transformers used for transporting high voltage electricity from remote generators to population centres. TransGrid's current 2018–23 regulatory control period concludes on 30 June 2023.

This F&A paper sets out our proposed approach to the economic regulation of TransGrid's revenues for the 2023–28 period, including our proposed application of incentive schemes and allowances, as set out below:[1]

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

Previous consultation

On 30 November 2020, we invited stakeholder submissions following our notice to amend or replace the current F&A paper for TransGrid for the 2023–28 period. We did not receive any submissions.[2]

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1 In accordance with sub-clauses 6A.10.1A(a)(1) and (e) of the NER, our F&A paper for TransGrid for the 2023–28 period must be published by 31 July 2021.

2 The stakeholder submissions period on our notice to amend or replace the current F&A paper for TransGrid ran from 30 November to 15 December 2020.

On 30 December 2020, we decided to amend the current F&A for TransGrid for the 2023–28 period due to the introduction of the DMIAM.

Next steps

Following the release of this final F&A paper, TransGrid must submit its 2023–28 revenue proposal by 31 January 2022. Table 1 summarises the transmission revenue determination process.

Table 1 TransGrid's 2023–28 transmission revenue determination process

Step	Indicative date
AER publishes F&A paper	30 July 2021
TransGrid submits revenue proposal to the AER	31 January 2022
AER publishes issues paper	March 2022*
AER holds public forum	April 2022*
Submissions on issues paper and revenue proposal close	May 2022*
AER publishes draft decision	September 2022*
AER holds public forum (predetermination conference)	October 2022*
TransGrid submits revised revenue proposal to the AER	December 2022*
Submissions on draft decision and revised revenue proposal close	January 2023*
AER publishes final decision	28 April 2023

Source: NER, Chapter 6A, Part E.

Notes: * Dates are based on the AER receiving compliant proposals. The NER does not provide a specific timeframe for publishing a draft decision; only a final decision.

Contents

1 Overview

The purpose of the F&A is to provide TransGrid and consumers with an indication of our likely position on matters that TransGrid is required to address in its upcoming 2023–28 revenue proposal. It provides a degree of regulatory predictability.

This F&A paper sets out how we propose to apply a range of incentive schemes and allowances and other guidelines to TransGrid's 2023–28 revenue proposal, as well as our approach to calculating depreciation. The positions we set out in this paper are not binding on the AER or TransGrid.[3] This means that during the determination process, it is open to us to change our position, and for TransGrid to propose a different position, on matters set out in the F&A paper. If our position changes from the one set out in this paper, we will provide clear reasons.

Incentive schemes and allowances encourage transmission network service providers (TNSPs) to manage their respective businesses in a safe and reliable manner that benefits the long-term interests of consumers. Such 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 these schemes are to:

- encourage appropriate levels of service quality
- maintain network reliability as appropriate
- incentivise TNSPs to spend efficiently on capital expenditure (capex) and operating expenditure (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 incentive schemes and allowances below, and also provide an overview of our expenditure forecast assessment guideline and approach to calculating depreciation.

1.1 Upcoming incentive scheme review

We are currently planning for a review of our incentive schemes to ensure that they remain relevant and fit-for-purpose. This will include the design and application of the CESS, EBSS and STPIS to transmission network service providers, and will consider stakeholder concerns and feedback.

We aim to finalise the review in the second half of 2022 providing scope to incorporate elements of the review in TransGrid's revenue determination. However, our ability to

[3] NER, cl. 6A.10.1A(f).

reflect changes in the draft determination depends on the issues raised by stakeholders and the nature of any changes to the schemes. The AER will work closely with all affected stakeholders throughout the incentive scheme review and this determination process.

Section 1.2 sets out how the AER intends to apply the schemes at present.

1.2 Summary of F&A paper final positions

Table 1 below sets out a summary of our F&A paper final positions in terms of the application of incentive schemes and allowances, expenditure forecast assessment guideline, and approach to calculating depreciation, to TransGrid's 2023–28 revenue determination.

Table 1. Summary of AER position to TransGrid for the 2023–28 period

Name of scheme or mechanism	Applied	Further information
Service target performance incentive scheme (STPIS)[4]	Version 5	Section 2 (pp. 13–16)
Efficiency benefit sharing scheme (EBSS)[5]	Version 2	Section 3 (pp. 17–19)
Capital expenditure sharing scheme (CESS)[6]	Version 1	Section 4 (pp. 20–21)
Small-scale incentive scheme (SSIS)[7]	Not applied	Section 5 (p. 22)
Demand management innovation allowance mechanism (DMIAM)[8]	Applied	Section 6 (p. 23)
Expenditure forecast assessment guideline	Applied	Section 7 (pp. 24–25)
Depreciation	Applied forecast depreciation	Section 8 (pp. 26–28)

4 STPIS provides a financial incentive to TNSPs to maintain and improve service performance.

5 EBSS aims to provide a continuous incentive for TNSPs to pursue efficiency improvements in opex, and provide for sharing these efficiencies between TNSPs and network users.

6 CESS provides financial rewards to TNSPs whose capex becomes more efficient and financial penalties to those whose capex becomes less efficient.

7 Scheme would reward network service providers for improving their customer service, or penalise then if service deteriorates.

8 DMIAM provides TNSPs with funding for research and development in demand management projects that have the potential to reduce long-term network costs.

1.3 TransGrid's views on the existing F&A paper

On 30 October 2020, TransGrid requested the AER to amend or replace the existing F&A paper that will apply to it for the 2023–28 period.[9] In its letter, TransGrid set out its preliminary views on the matters requiring the AER's consideration prior to finalising the F&A paper, as set out below.

1.3.1 Service classification

On 27 April 2020, TransGrid submitted a rule change request to the Australian Energy Market Commission (AEMC) seeking confirmation that system strength services are a prescribed transmission service. The AEMC is expected to release its final determination on 21 October 2021.[10]

We will review TransGrid's service classification as part of our 2023–28 draft decision, having regard to the AEMC's final determination.

1.3.2 Incentive schemes and allowances

1.2.2.1 Efficiency benefit sharing scheme

TransGrid notes that with recent falls in the discount rate, the target sharing ratio under the EBSS has fallen sharply compared with the 30 per cent applying under the CESS. TransGrid, therefore, requests the AER to review whether the EBSS is achieving the target sharing ratio, and if not, adjust for any changes in the ratio resulting from changes to the discount rate to ensure that incentives across the EBSS and CESS are balanced and the ratio is achieved.

We note that the current version of the EBSS does not target a specific sharing ratio between the TNSP and its customers. Instead, 30 per cent was considered an approximate sharing outcome for a five year regulatory period at the time of the publishing of the scheme. The share of efficiency gains the TNSP retains is determined by the length of the carryover period.[11] Therefore under the current scheme, the target ratio can only be changed by changing the length of the regulatory period.

As discussed in section 1.1, the AER is currently planning a broad review of incentive schemes to consider TransGrid's concerns.

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9 TransGrid, *Request for revised framework and approach paper*, 30 October 2020 available at https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/transgrid-determination-2023-28/initiation.

10 On 15 July 2021, the AEMC delayed its final determination to 21 October 2021. AEMC, Rule change on the efficient management of system strength on the power system. Available here https://www.aemc.gov.au/rule-changes/efficient-management-system-strength-power-system.

11 AER, *Explanatory statement – Efficiency benefit sharing scheme,* November 2013, pp. 17–19. https://www.aer.gov.au/system/files/AERexplanatorystatement-efficiencybenefitsharingschemeNovember2013.docx.

1.2.2.2 Capital expenditure sharing scheme

TransGrid supports the continued application of CESS to its business-as-usual capex for the 2023–28 period. However, it considers the application of the CESS to major projects should be addressed as part of the broader considerations of how best to manage, and fairly allocate, risks with major Integrated System Plan (ISP) projects between network service providers and customers. TransGrid noted it expected this would be considered by the AER as part of its Transmission Investment Regulatory Review.

Since TransGrid's submission, the AER has published a Guidance Note on the regulation of actionable ISP projects.[12] This note provides information on how the AER will approach our regulatory assessment for actionable ISP projects under the economic regulatory framework set out in the NER.

We also understand the AEMC intends to undertake a review that considers options to support the timely and efficient delivery of large transmission projects that are in the long-term interests of consumers, with the scope of the review to include matters such as financing, regulatory and governance issues. As discussed in section 1.1, TransGrid's concerns will also be addressed by the AER's broad review of incentive schemes.

1.2.2.3 Service target performance incentive scheme

TransGrid requests the AER consults on version 5 of the STPIS to ensure that the market impact component (MIC) appropriately reflects the cost of congestion rather than instances of material congestion. TransGrid's request is supported by other transmission network service providers through Energy Networks Australia.[13]

As discussed in section 1.1, the AER is currently planning a broad review of incentive schemes to address TransGrid's concerns. As set out in section 2, our position is to apply version 5 of the STPIS to TransGrid for the 2023–28 period.

1.2.2.4 Demand management innovation allowance mechanism

TransGrid supports the application of the DMIAM to its 2023–28 revenue determination.

As set out in section 6, our position is to apply the DMIAM to TransGrid for the 2023–28 period.

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[12] AER, *Guidance Note – Regulation of actionable ISP projects*, March 2021 available at: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/regulation-of-large-transmission-projects/final-decision#step-75815.

[13] In AusNet Services' request for a replacement F&A for the 2022–27 period, it also raised concerns regarding the ability of STPIS version 5 to provide appropriate incentives in the current environment of increasing investment in renewable generation.

1.2.2.5 Small-scale incentive scheme

TransGrid notes that a SSIS exists for DNSPs, and requests the AER to indicate in its F&A paper whether it is considering developing a SSIS for application to TNSPs, such as TransGrid in the 2023–28 period.

TransGrid has not proposed a detailed transmission incentive scheme design developed in conjunction with its customers. In the absence of a detailed scheme design, our position is to not apply a SSIS to TransGrid for the 2023–28 period.

1.3.3 Integrated System Plan

TransGrid considers the commencement of the ISP Rules on 1 July 2020, to make the Australian Energy Market Operator's (AEMO) ISP and its optimal development path actionable, will have significant implications for its 2023–28 revenue determination. TransGrid expects to spend more than $6.5 billion (nominal) over the next few years to deliver its share of the major ISP projects, and considers a key issue for the F&A paper is how best to address the risks associated with the delivery of major ISP projects that are anticipated to progress during the 2023–28 period, including clarifying:

- how costs for major ISP projects will be assessed as part of the revenue determination process, and how they will allow for risk costs given the magnitude of these projects
- how the existing expenditure incentive schemes will apply, or may be modified, for the major ISP projects
- how expenditure on major ISP projects will be treated for the purposes of the ex-post review provisions in the NER.

TransGrid also requests the AER to provide in-principle approval for a nominated pass through event to allow the costs associated with undertaking early works required under the new ISP Rules. TransGrid considers the treatment of these costs as a cost pass through is a more appropriate mechanism to address uncertainty rather than incorporating an allowance for uncertain costs as part of TransGrid's forecast opex.

We recognise that TransGrid's 2023–28 revenue proposal will be made in the context of the new rules relating to the actionable ISP. This framework retains a rigorous cost-benefit analysis, applied by the AEMO when developing the ISP and through application of the regulatory investment test for transmission (RIT-T) to actionable projects. We will continue to engage with TransGrid though the revenue determination process to understand the interplay between TransGrid's revenue proposal and the ISP. We have considered a number of these issues as part of our Transmission Investment Regulatory Review.

As noted earlier, in March 2021, the AER published a Guidance Note on the regulation of actionable ISP projects.[14] This note provides information on how the AER will approach our regulatory assessment for actionable ISP projects under the economic regulatory framework set out in the NER, including in relation to:

- the assessment process through which forecast expenditure for actionable ISP projects is typically assessed
- how TNSPs can, in some circumstances, stage the regulatory process for actionable ISP projects, and
- the ex-post measures that may apply to capex forecasts that contain actionable ISP project costs.

As noted earlier, we understand the AEMC also intends to undertake a review to consider options to support the timely and efficient delivery of large transmission projects that are in the long-term interests of consumers, with the scope of the review to include matters such as financing, regulatory and governance issues. We also note the AER is currently scoping a broad review of incentive schemes to address any stakeholder concerns.

1.3.4 Regulatory sandbox

TransGrid considers the F&A paper should recognise the potential application of regulatory sandbox arrangements in its 2023–28 revenue determination.

Regulatory sandboxing refers to the framework within which participants can test innovative concepts in the market under relaxed regulatory requirements at a smaller scale, on a time-limited basis and within appropriate safeguards in place.[15]

We will work collaboratively with TransGrid to develop a sandbox waiver process that is focussed on supporting a better process for reform in the long-term interests of customers.

1.3.5 Stakeholder engagement

TransGrid requested the AER to detail in its F&A paper its expectations in relation to stakeholder engagement, including the role of the Customer Forum and developing an early engagement plan, having regard to recent DNSP and TNSP stakeholder engagement activities and approaches.

Consumer engagement helps businesses determine how best to provide services that align with consumers' long-term interests. Consumer engagement in this context is about working openly and collaboratively with electricity consumers and providing

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[14] AER, *Guidance Note – Regulation of actionable ISP projects*, March 2021.

[15] AEMC, *Regulatory sandboxes – Advice to COAG Energy Council on rule drafting, Final Report*, 26 March 2020, p. i.

opportunities for their views and preferences to be heard and to influence TransGrid's decisions.

We will use a range of considerations to demonstrate whether consumers have been genuinely engaged in the development of TransGrid's 2023–28 revenue proposal. As set out in Table 2, this includes the nature of engagement, breadth and depth of engagement, clearly evidenced impact and assessment of outcomes (or 'proof points'). Examples of our assessment of consumer engagement undertaken by distribution and transmission network service providers can be found in our recent decisions.[16]

[16] See AER, *Draft decision, Jemena distribution determination 2021–26, Overview,* September 2020, p. 43 and Table 7; AER, *Draft decision, Evoenergy access arrangement 2021–26, Overview,* November 2020, p. 16; AER, *Draft decision, Australian Gas Networks (SA) access arrangement 2021–26, Overview,* November 2020, p. 19; AER, *Draft decision, AusNet Services transmission determination 2022–27, Overview,* June 2021, p. 23; AER, *Issues Paper – Powerlink Queensland (Electricity transmission revenue proposal 1 July 2022–30 June 2027)*, March 2021, p. 8 and Table 3.

Table 2. AER framework for consumer engagement

Element	Examples of how this could be assessed
Nature of engagement	• Consumers partner in forming the proposal rather than asked for feedback on network business's proposal • Relevant skills and experience of the consumers, representatives, and advocates • Consumers provided with impartial support to engage with energy sector issues • Sincerity of engagement with consumers • Independence of consumers and their funding • Multiple channels used to engage with a range of consumers across a network business's consumer base
Breadth and depth	• Clear identification of topics for engagement and how these will feed into the regulatory proposal • Consumers consulted on broad range of topics • Consumers able to influence topics for engagement • Consumers encouraged to test the assumptions and strategies underpinning the proposal • Consumers were able to access and resource independent research and engagement
Clearly evidenced impact	• Proposal clearly tied to expressed views of consumers • High level of business engagement (e.g. consumers given access to the network business's CEO/Board) • Network business responds to consumer views rather than just recording them • Impact of engagement can be clearly identified • Submissions on proposal show consumers feel the impact is consistent with their expectations

Proof point	• Reasonable opex and capex allowances proposed:
	  ○ In line with, or lower than, historical expenditure
	  ○ In line with, or lower than, our top-down analysis of appropriate expenditure
	  ○ If not in line with top-down, can be explained through bottom-up category analysis

2 Service target performance incentive scheme

This section sets out our proposed approach and reasons on how we intend to apply the STPIS to TransGrid in the 2023–28 period.[17]

The AER creates, administers and maintains the STPIS in accordance with the requirements of the NER.[18] The STPIS is part of an incentive based regulation structure we use across all the electricity transmission networks we regulate.

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.[19]

In developing the STPIS, the AER had regard to the requirements of the NER. 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.

2.1 AER's position

Our position is to apply version 5 of the STPIS to TransGrid for the 2023–28 period. We also note the AER is currently scoping a broad review of incentive schemes to address any stakeholder concerns.

2.2 AER's assessment approach

The STPIS works as part of the 'building block' determination.[20] As part of a 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.[21] In each regulatory year, the TNSP's maximum allowed revenue (MAR) is adjusted based on its performance against the STPIS parameters in the previous calendar year.

We currently apply version 5 of the STPIS as follows:

- the parameters for each service component (SC) and the maximum revenue increment/decrement that a TNSP can receive for a given level of performance will be those prescribed in the scheme. The applicable parameter values will be set out

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17 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

18 NER, cl. 6A.7.4(a).

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

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

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

in the TNSP's transmission determination. The TNSP's MAR will be adjusted according to its performance against these parameter values, as assessed by us, in accordance with the scheme

- the market impact component (MIC) annual performance target[22] will be calculated in accordance with the scheme (see Appendix C, and example 2 in Appendix F)[23]
- the network capability component (NCC) of the scheme will apply to the TNSP.

In its 2023–28 revenue proposal, TransGrid must:

- submit proposed values for the SC parameters[24]
- submit data for its MIC for the preceding seven regulatory years.[25] TransGrid must submit a proposed value for a performance target, unplanned outage event limit, and dollar per dispatch interval incentive.[26]
- submit a network capability incentive parameter action plan (NCIPAP).[27]

We will accept TransGrid's proposed parameter values for the service, market impact and network capability components if the proposed values comply with clauses 3.2, 4.2 and 5.2, respectively, of version 5 of the STPIS.[28]

Version 5 of the STPIS can result in a maximum revenue increment/decrement of up to 3.75 per cent of the TNSP's MAR.[29]

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22 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, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, Appendix C available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

23 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 4.2(g) and Appendix F available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

24 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 3.2 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

25 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 4.2(a) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

26 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 4.2(b) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

27 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 5.2(b) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

28 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

29 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-

2.3 Reasons for AER's position

Version 5 of the STPIS seeks to ensure that cost reductions do not result in deterioration of service performance for customers. We consider it will provide appropriate incentives for TransGrid to:

- 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.

Additional information on the service, market impact and network capability components of the STPIS is provided below.

2.3.1 Additional information on STPIS components

2.3.1.1 Service component

The service component (SC) 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 maximum allowed revenue (MAR) for the relevant calendar year.[30]

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 SC 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.[31]

The scheme contains definitions for each parameter. The definitions specify the applicable sub-parameters, unit of measure, source of performance data, the formula

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performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803. Calculated as Service Component: max +/-1.25% MAR, Market Impact Component: max +/-1.00% MAR, and Network Capability Component: max +/-1.5% MAR, MAR, max decrement depends on allowance and number of projects not completed and their project range as per cll. 5.3(b)-(c).

30 AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 3.3(a) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

31 AER, Transmission network service target performance incentive scheme, version 5 (corrected), October 2015, pp. 7–8 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

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 TransGrid's proposed performance targets, caps and weightings comply with STPIS version 5 requirements.[32] We must accept TransGrid's proposed parameter values if they comply with the requirements of the STPIS.[33] We may reject them if they are inconsistent with the objectives of the STPIS.[34]

2.3.1.2 Market impact component

The MIC will be applied to TransGrid to incentivise it to minimise the impact of its transmission outages that can affect NEM outcomes. In this component, TransGrid will receive a financial incentive which falls within a range of -1 per cent (penalty) and +1 per cent (reward) of its MAR.[35]

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

2.3.1.3 Network capability component

The NCC will be applied to TransGrid 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. AEMO will play a part in prioritising the projects to deliver best value for money for customers. In this component, TransGrid will receive an annual allowance of up to a total of +1.5 per cent of its MAR, but we may reduce the final payment where priority projects are not achieved.[36]

We will assess TransGrid's NCIPAP in accordance with section 5.2 of version 5 of the STPIS.

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[32] AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 3.1 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

[33] AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 3.2(a) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

[34] AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 3.2(l) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

[35] AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cl. 4.3 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

[36] AER, *Transmission network service target performance incentive scheme, version 5 (corrected),* October 2015, cll. 5.3(b)–(c) available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/service-target-performance-incentive-scheme-version-5-september-2015-amendment/final-decision#step-40803.

3 Efficiency benefit sharing scheme

The EBSS is intended to provide a continuous incentive for TNPs 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.

We address our position on the application of the EBSS in relationship to our proposed opex forecasting approach and benchmarking below. We also explain the rationale underpinning the scheme.

3.1 AER's position

We intend to apply the EBSS to TransGrid in the 2023–28 period if we are satisfied the scheme will fairly share efficiency gains and losses between the business and consumers.[37] This will occur only if the opex forecast for the following period is based on the businesses revealed costs. Our transmission determination for TransGrid for the 2023–28 period will specify if and how we will apply the EBSS.[38] We also note the AER is currently scoping a broad review of incentive schemes to address any stakeholder concerns.

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. We must also have regard to the following factors in developing and implementing the EBSS:

- 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 position

The EBSS applies to TransGrid in the current (2018–23) period.

The decision to apply the EBSS will depend on whether we expect to use TransGrid's revealed costs in the 2023–28 period to forecast opex in the 2028–33 period.

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

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

3.3.1 Why we would apply the EBSS

We will only apply the EBSS in the 2023–28 period if we expect we will use a revealed cost forecasting approach to forecast opex for the 2028–33 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 TNSP), 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 TNSP has an incentive to spend more opex in the expected base year. Also, a TNSP 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 TNSP to inflate opex in the expected base year in order to gain a higher opex forecast for the next regulatory control period
- it provides a continuous incentive for a TNSP 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 TNSP may have to inappropriately capitalise opex.[39] Where opex incentives are balanced with capex incentives, a TNSP 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.

3.3.2 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 2028–33 period.

If we apply the EBSS but do not forecast opex using revealed costs, a TNSP 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 TNSP expects this, it has an incentive to increase its EBSS carryover by reducing opex in its base year, knowing that it will not reduce its opex forecast.[40] Consumers would pay the

[39] NER, cl. 6A.6.5(b)(3).

[40] 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.

EBSS reward, but not receive a share of the underspend 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.[41]

If a TNSP's revealed costs in the current (2018–23) period are materially higher than the opex incurred by a benchmark efficient TNSP, we will be unlikely to use revealed costs to forecast opex for the 2023–28 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.[42]

Appendix A of the explanatory statement to the EBSS provides a detailed example of how the EBSS works with a revealed cost forecasting approach.[43]

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

42 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.

43 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 provides financial rewards to TNSPs whose capex becomes more efficient, and financial penalties for 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/overspend
- CESS payments are calculated taking into account the financing benefit or cost to the TNSP of the underspend/overspend.[44] Further adjustments can also be made to account for deferral of capex and ex post exclusions of capex from the RAB
- 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/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 AER's position

The CESS applies to TransGrid in the current (2018–23) period. Our position is to continue to apply the CESS, as set out in our capex incentives guideline, to TransGrid in the 2023–28 period.[45] We consider this will contribute to the capex incentive objective.[46] We also note the AER is currently scoping a broad review of incentive schemes to address any stakeholder concerns.

4.2 AER's assessment approach

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

- make that decision in a manner that contributes to the capex incentive objective

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44 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.

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

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

- consider the CESS principles, capex objectives, other incentive schemes, and (where relevant) the opex objectives, as they apply to the particular TNSP, and the circumstances of the TNSP.

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.

4.3 Reasons for AER's position

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 period. At the end of the regulatory control period, the TNSP's RAB will be updated to include new capex. The RAB will include a lower capex amount than would be 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 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/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.

5 Small-scale incentive scheme

The NER provide that we may develop a SSIS.[47] On 21 July 2020, we published an electricity distribution SSIS for customer service, referred to as the 'customer service incentive scheme' (CSIS).[48] Development of the CSIS was a collaborative effort between networks, consumers and market bodies. It was driven by a proposal to apply customer service incentives coming out of AusNet Service's trial of 'New Reg' – a joint initiative between the AER, Energy Networks Australia (ENA) and Energy Consumers Australia (ECA) to explore ways to improve sector engagement and identify opportunities for regulatory innovation. The scheme rewards electricity distribution network service providers for improving their customer service, or penalise them if service deteriorates.

AusNet Services trialled New Reg in developing its 2021–26 electricity distribution regulatory proposal. As part of the negotiations, AusNet Services negotiated the customer service incentives with its Customer Forum and proposed to apply these incentives in its regulatory proposal. Under these CSIS incentives, AusNet Services will be penalised or rewarded based on how its customers rate its communication concerning planned and unplanned outages, its customer service for connections and complaints.

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.

TransGrid requested the AER to indicate in its F&A paper whether the AER is considering developing a SSIS for application to TransGrid's 2023–28 revenue determination.

The AER considers the TNSP needs to drive this process, crafting a detailed scheme design proposal informed by meaningful consumer engagement. We note that TransGrid has not proposed a detailed transmission incentive scheme design, developed in conjunction with its customers. As such, in the absence of such a proposal, our position is to not apply a SSIS to TransGrid for the 2023–28 period.

47 NER, cl. 6A.7.5.

48 AER, *Explanatory statement – customer service incentive scheme*, 21 July 2020.

6 Demand management innovation allowance mechanism

On 1 March 2019, Energy Networks Australia (ENA) submitted a rule change request to the AEMC proposing amendments to the NER that would require the AER to develop a demand management incentive scheme (DMIS) and a DMIAM to apply to TNSPs.[49] On 5 December 2019, the AEMC published a final rule determination to apply the DMIAM – but not the DMIS – to TNSPs.[50]

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.[51]

In accordance with the NER[52] and following stakeholder consultation on a draft DMIAM, the AER published the final DMIAM on 27 May 2021.[53] The DMIAM provides TNSPs with funding for research and development in demand management projects that have the potential to reduce long-term network costs.

Our position is to apply the DMIAM to TransGrid for the 2023–28 period.

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

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

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

52 NER, cl. 6A.7.6.

53 AER, *Demand management innovation allowance mechanism, Electricity transmission network service providers*, May 2021 available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/demand-management-innovation-allowance-mechanism-transmission/final-decision.

7 Expenditure forecast assessment guideline

The expenditure forecast assessment guideline (guideline) sets out our expenditure forecast assessment approach as developed, and consulted upon, during the Better Regulation program.[54] 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 TransGrid for the 2023–28 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 TransGrid to advise us of the methodology it proposes to use to prepare its forecasts by 30 June 2021.[55]

The F&A paper must set out our proposed approach to application of the guideline.[56] This will provide TransGrid with clarity regarding the information it should include in its 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:

- 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.[57]

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

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54 We were required to develop the EFA 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.

55 NER, cl. 6A.10.1B.

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

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

the regulatory information notice that we will issue to the TNSP for the next regulatory control period.

8 Depreciation

This section sets out our proposed approach to calculating depreciation when the RAB is rolled forward to the commencement of the 2028–33 period.

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

- actual capex commissioned during the regulatory control period (actual depreciation). We roll forward the RAB based on actual capex less the depreciation on the actual capex commissioned 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.

For TNSPs, the recognition of capex in our regulatory models is based on a partially as incurred approach.[58] Under this approach, the return on capital is calculated based on as incurred forecast capex and the return of capital (depreciation) is calculated based on as commissioned forecast capex.[59]

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

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.[60] 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.

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58 AER, *Final decision: Electricity transmission network service providers – Roll forward model handbook*, April 2020, p. 13; AER, *Final decision: Electricity transmission network service providers – Post-tax revenue handbook*, April 2021, p. 22.

59 Forecast capex is net of asset disposals.

60 AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 11–12.

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.

8.1 AER's position

Our position is to use the forecast depreciation approach to establish the RAB at the commencement of the 2028–33 period for TransGrid.[61]

8.2 AER's assessment 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.[62] Our decision must be consistent with the capex incentive objective.[63] We must have regard to:[64]

- 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 guidelines
- 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

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61 NER, cl. 6A.10.1A(b)(6).
62 NER, cll S6A.2.2B and 6A.5A(b)(3).
63 NER, cl S6A.2.2B(b).
64 NER, cl S6A.2.2B.

- the balance of incentives with service outcomes
- the substitutability of assets of different asset lives.

8.3 Reasons for AER's position

The opening RAB at the commencement of the 2023–28 period will be established using forecast depreciation, as stated in our previous determination that applies to TransGrid for the current 2018–23 period.

The use of forecast depreciation to establish the opening RAB for the commencement of the 2028–33 period, therefore, maintains the current approach. TransGrid is currently subject to version 1 of the CESS and, and as set out in section 4 above, we propose to continue to apply version 1 of the CESS in the 2023–28 period. We consider that the CESS will provide sufficient incentives for TransGrid to achieve capex efficiency gains over that period.

We are satisfied that the incentive provided by the application of the CESS, in combination with the use of forecast depreciation and our other ex post capex measures, would be sufficient to achieve the capex incentive objective.[65]

[65] AER, *Capital expenditure incentive guideline for electricity network service providers*, November 2013, pp. 13–20 and pp. 21–22.

A 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
CSIS	Customer service incentive scheme (small-scale incentive scheme for customer service)
DMIAM	Demand management innovation allowance mechanism
DMIS	Demand management incentive scheme
DNSP	Distribution network service provider
EBSS	Efficiency benefit sharing scheme
F&A	Framework and approach
ISP	Integrated System Plan
MAR	Maximum allowed revenue
MIC	Market impact component
NCIPAP	Network capability incentive parameter action plan
NCC	Network capability component
NEM	National Electricity Market
NER or Rules	National Electricity Rules
Opex	Operating expenditure
RAB	Regulatory asset base
SC	Service component
SSIS	Small-scale incentive scheme
STPIS	Service target performance incentive scheme
TNSP	Transmission network service provider