AEMC

RULE

Australian Energy Market Commission

CONSULTATION PAPER

NATIONAL ELECTRICITY AMENDMENT (ACCOMMODATING FINANCEABILITY IN THE REGULATORY FRAMEWORK) RULE

PROPONENT

Commonwealth Minister for Climate Change and Energy

8 JUNE 2023

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Energy Ministers' Meeting (formerly the Council of Australian Governments Energy Council). We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the Energy Ministers' Meeting.

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SUMMARY

1 Australia is undergoing a transformational shift to net zero. A key feature of this transformation is the replacement of centralised thermal generation with decentralised renewable generation.

2 There is broad consensus that transmission is a critical enabler for the transition to net zero, both in the National Electricity Market (NEM) and the economy more broadly. This transition will require an unprecedented level of investment in, and build of, transmission infrastructure to deliver power from renewable generation and energy storage to consumers, and to deliver infrastructure quickly.

3 The scale of transmission investment required, coupled with the speed of the energy transition, presents unique opportunities and challenges for the existing regulatory framework. This framework was developed and has evolved over a period of incremental growth of the grid where the framework was weighted to minimise the risk of overbuilding, rather than the current required pace of step-change growth set out in the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP).

4 The scale and pace of investment required for the transition to net-zero raises questions as to whether actionable ISP projects will be financeable, and this is the topic of this rule change request. In this context, financeability refers to the ability of Transmission Network Service Providers (TNSPs) to efficiently raise capital to finance their activities.

5 In our review of Stage 2 of the Transmission Planning and Investment Review (TPIR or review) we recognised that as part of the revenue setting framework, the regulatory depreciation revenue building block consists of straight line depreciation less the forecast indexation of capital. This feature contributes to financeability challenges because it can reduce cash flow early in the life of significant ISP projects. Providing flexibility in the revenue setting framework to alter the profile of revenue recovery can address cash flow issues without increasing the cost to customers over the life of the investment.

We are seeking your views on financeability issues for actionable ISP projects

6 The Honourable Chris Bowen MP, Commonwealth Minister for Climate Change and Energy (Minister or proponent) considers that there is a foreseeable risk that financeability challenges could arise for actionable ISP projects, which may impact the timely and efficient delivery of these major transmission projects. This is because:

- TNSPs may face challenges in raising capital to proceed with ISP projects
- the existing revenue framework is not sufficiently flexible to address financeability challenges that may arise in future.

7 The Minister's view reflects the conclusions set out recently by the Commission in Stage 2 of TPIR.

8 To address the risk faced by TNSPs, the Minister submitted a rule change request on 11 April

2023 that seeks to do the following.

- Introduce greater flexibility in the revenue-setting framework in the National Electricity Rules (NER) to vary the depreciation profile of assets that form part of an actionable ISP project. This reflects our recommended solution in TPIR.
- Allow TNSPs to recover depreciation of biodiversity offset costs on an as incurred basis. We did not raise this solution in TPIR.
- Clarify the treatment of depreciation for asset classes, including biodiversity offsets. We did not raise this solution in TPIR.

9 The Minister expects that, if the proposed solution is implemented to allow depreciation profiles for assets that form part of actionable ISP projects to be varied, it would be the primary mechanism that TNSPs use to address their financeability concerns. Up until recently, TNSPs have sought alternative methods to address their financeability concerns. These methods have included sourcing concessional finance from the Commonwealth Government, for example through the Rewiring the Nation (RTN) program.[1]

10 Considering the NEO[2] and the issues raised in the rule change request, the Commission proposes to assess the rule change request against five assessment criteria outlined below.

- Outcomes for consumers.
- Principles of good regulatory practice.
- Principles of market efficiency.
- Decarbonisation.
- Safety, security and reliability.

Submissions are due by 14 July 2023 with other engagement opportunities to follow

11 Written submissions responding to this consultation paper must be lodged with Commission by 14 July 2023 through the AEMC website, www.aemc.gov.au.

12 There will be opportunities for you to engage with the AEMC throughout this process, such as one-on-one discussions or industry briefing sessions. See the section of this paper about "How to engage with us" for further information.

Related rule change process

13 The Commission is separately considering a rule change request from the Minister on *Concessional Finance for Transmission Network Service Providers*.

14 That rule change request relates to amending the NER to enable the AER to take into account how any financial benefits that may arise from concessional financing of transmission infrastructure are shared between consumers and TNSPs.

1 Rule change request, p. 1.
2 Section 7 of the National Electricity Law (NEL)

Full list of consultation questions

QUESTION 1: IDENTIFYING THE PROBLEM

Do stakeholders have any new information or views on the problem raised in this rule change request, having regard to what has already been consulted on and established in TPIR?

QUESTION 2: HOW TO ASSESS FINANCEABILITY APPLICATIONS

(a) Should TNSPs have to submit an application to the AER to vary the depreciation profile of actionable ISP projects? If so, what information should this include?

(b) Should the AER vary the depreciation profile of actionable ISP projects using principles or a prescriptive approach?

(c) What level of AER discretion is appropriate?

(d) Do you consider that the proposed principles are appropriate? Should any other assessment factors be taken into account?

QUESTION 3: LEVEL OF FINANCEABILITY ASSESSMENT

(a) Should the financeability assessment be at the TNSP RAB level or the ISP project level?

QUESTION 4: FINANCEABILITY ASSESSMENT PROCESS AND TIMING

Is the proposed process and timing to assess requests to vary depreciation for actionable ISP projects practical and efficient? If not, what alternative processes and timings do you suggest be specified in the NER?

QUESTION 5: WILL THE PROPOSAL RESOLVE THE PROBLEM?

(a) Will the proposed solution to vary depreciation profiles resolve the problem raised in the rule change request? Would it reduce or eliminate the need for concessional finance from governments for ISP projects?

(b) Are there any alternative solutions that would resolve the problem and be more preferable and aligned with the long-term interests of consumers?

QUESTION 6: AER GUIDANCE

Should the AER be required to publish guidance on how it may vary the depreciation profile for assets that form part of an actionable ISP projects?

QUESTION 7: TRANSITIONAL ARRANGEMENTS

(a) If the proposed rule is made, should the AER be required to develop any guidance, or amend any AER models, before or after the commencement of the rule? If so, what level of prescription should be included in the NER?

(b) If the proposed rule is made, should it provide a transitional period to enable market participants to prepare? If so, how long should such a transitional period be?

(c) Is there a need for any transitional arrangements to assist with managing interactions other NER amendments or other market reforms? If so, what?

QUESTION 8: BIODIVERSITY OFFSET ARRANGEMENTS ACROSS NEM JURISDICTIONS

Are the costs of meeting biodiversity obligations material? Are they likely to impact financeability of actionable ISP projects?

QUESTION 9: RECOGNISING AND MANAGING BIODIVERSITY OFFSET COSTS

(a) Does the AER already have discretion to do what the rule change request is proposing (i.e. applying depreciation as incurred for transmission assets)?

(b) Should land purchased specifically for the purpose of meeting biodiversity offset obligations be depreciable? Should other costs of meeting biodiversity offset obligations be depreciable?

(c) Do you agree or disagree that recovering depreciation of biodiversity offset costs as incurred (as opposed to as commissioned), would be an appropriate solution to the financeability problem? Does this re-allocate completion risk from TNSP's to consumers?

(d) Are the nature of biodiversity offsets different from other assets that comprise a specific actionable ISP project, such that biodiversity offsets should be depreciated on a different basis to other assets?

QUESTION 10: APPLICATION OF PROPOSED SOLUTION TO INTENDING TNSPS

If TNSPs are able to recover depreciation of biodiversity offsets on an as incurred basis, should this be extended to intending TNSPs?

QUESTION 11: CLARIFYING DEPRECIATION TREATMENT OF ASSET CLASSES

(a) Do you agree with the proposal to require the AER to explicitly outline how depreciation would apply to all asset classes in actionable ISP projects? Should this include biodiversity assets?

(b) If you agree that the deprecation treatment of asset classes should be documented, how should it be implemented — through the NER, AER guidelines and/or other methods?

QUESTION 12: ASSESSMENT FRAMEWORK

Do you agree with the proposed assessment framework? Are there additional principles that the Commission should take into account or are there principles that are not relevant?

How to make a submission

We encourage you to make a submission

Stakeholders can help shape the solutions by participating in the rule change process. Engaging with stakeholders helps us understand the potential impacts of our decisions and, in so doing, contributes to well-informed, high quality rule changes.

We have included consultation questions in this paper, however, you are welcome to provide feedback on any additional matters that may assist the Commission in making its decision.

How to make a written submission

Due date: Written submissions responding to this consultation paper must be lodged with Commission by 14 July 2023.

How to make a submission: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code ERC0348.[3]

You may, but are not required to, use the stakeholder submission form published with this consultation paper. Tips for making submissions are available on our website.[4]

3 If you are not able to lodge a submission online, please contact us .

4 See: https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/our-work-3

You can find more information on the rule change process in *The Rule change process – a guide for stakeholders.*[5]

Publication: The Commission publishes submissions on its website. However, we will not publish parts of a submission that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).[6]

For more information, you can contact us

Please contact the project leader with questions or feedback at any stage.

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5 *The rule change process: a guide for stakeholders, June 2017, available here: https://www.aemc.gov.au/sites/default/files/2018-09/A-guide-to-the-rule-change-process-200617.PDF*

6 Further information is available here: https://www.aemc.gov.au/contact-us/lodge-submission

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1 THE CONTEXT FOR THIS RULE CHANGE REQUEST

This consultation paper seeks stakeholder feedback on the rule change request submitted by the Commonwealth Minister for Climate Change and Energy (the Minister) to address the risk that financeability challenges could arise for actionable ISP projects.[7]

1.1 The Commonwealth Minister has proposed the rules be changed to address financeability risks for actionable ISP projects

On 28 October 2022, Energy Ministers agreed that the Commonwealth Minister submit a rule change request to the AEMC seeking to mitigate the foreseeable risk that financeability challenges could arise in relation to actionable ISP projects.[8]

The Commonwealth Minister considers that there is a foreseeable risk that financeability challenges could arise in relation to actionable ISP projects, as explained in chapter 2 of this consultation paper.[9]

To address this risk, the rule change request proposes the following solutions.

- A proposal to introduce greater flexibility for the AER to vary depreciation profiles of ISP projects. This reflects the AEMC's recommendation on financeability in the TPIR Stage 2 Final report, as explained in Appendix A.[10]
- A proposal to allow TNSPs to start recovering depreciation for biodiversity offset costs, as incurred, during construction of an ISP project. This proposal was not considered by the AEMC in TPIR Stage 2.
- A proposal that the AER must explicitly outline how depreciation is expected to be applied to different types of asset classes, including biodiversity offset.[11] This proposal was not considered by the AEMC in TPIR Stage 2.

Table 1.1 below summarises the rule change proposal against the current arrangements. More detail on the rule change proposal is set out in chapters 3 and 4 of this consultation paper.

7 AEMO, *2022 Integrated System Plan for the National Electricity Market*, June 2022.
8 Commonwealth Minister for Climate change and Energy, *Treatment of financeability for Transmission Network Service Providers — Rule change request*, 11 April 2023, p. 1.
9 Rule change request, pp. 1-2.
10 AEMC, *Transmission Planning and Investment Review — Stage 2 Final report*, 27 October 2022.
11 ibid.

Table 1.1: **Current and proposed arrangements to depreciate actionable ISP projects**

	ISP PROJECT UNDER CONSTRUCTION	ISP PROJECT COMPLETE AND PROVIDING PRESCRIBED TRANSMISSION SERVICES
Current arrangements	TNSPs have not historically recovered depreciation (return of capital). The NER is silent on recovery of depreciation as incurred.	TNSPs can recover depreciation, as the asset is operational and providing prescribed transmission services to customers. The AER sets depreciation under clause 6A.6.3 of the NER, as explained in Box 1.
Proposed rule	TNSPs can recover depreciation as incurred for biodiversity offset costs, but not other assets under construction.	• TNSPs can request to vary depreciation for any asset classes of an ISP project. • Clarify treatment of depreciation for different asset classes, including biodiversity offsets.

Source: AEMC.

1.2 Commencing the rule change process

Previous stakeholder engagement on the financeability of ISP projects through TPIR is outlined in Appendix A. This engagement has informed the rule change request.

This paper is the first stage of this rule change process. A standard rule change process is proposed. The remaining stages are:

- stakeholders lodge submissions on the consultation paper and engage through other channels to assist the Commission in making its decision
- the Commission publishes a draft determination and draft rule (if relevant)
- stakeholders lodge submissions on the draft determination and engage through other channels to assist the Commission in making its decision
- the Commission publishes a final determination and final rule (if relevant).

The key dates for this process are outlined below.

Figure 1.1: Key dates for this rule change process

Source: AEMC.

1.3 Related rule change process

The Commission is separately considering a rule change request from the Minister on *Concessional Finance for Transmission Network Service Providers*.[12]

That rule change request relates to amending the NER to enable the AER to take into account how any financial benefits that may arise from concessional financing of transmission infrastructure are shared between consumers and TNSPs.

Information on how to provide your submission and other opportunities for engagement on this related rule change are set out in the consultation paper available on the AEMC rule change page (ERC0349).

12 Commonwealth Minister for Climate Change and Energy, *Treatment of Concessional Finance for Transmission Network Service Providers - Rule change request*, 11 April 2023.

2 THE PROBLEM RAISED IN THE RULE CHANGE REQUEST

This section sets out the problem identified in the rule change request, and the materiality of this problem. The Minister's explanation of the financeability problem in the rule change request is consistent with the financeability issues identified and assessed by the Commission in TPIR Stage 2.

2.1 There is a foreseeable risk that financeability challenges could arise in relation to actionable ISP projects

In the context of TPIR and this rule change process, the term 'financeability' refers to the ability of TNSPs to efficiently (that is, without unnecessary costs) raise capital to finance their activities in the context of the framework used to determine regulated revenue.

Financeability challenges for TNSPs may arise from the way that cash flow is impacted by large investments in ISP projects relative to their existing RABs, over a short period. If TNSPs are unable to adapt their capital structures sufficiently quickly, this could negatively impact some financial metrics that are used to assess their creditworthiness.[13]

The Minister considers that there is a foreseeable risk that TNSPs may face financeability challenges in relation to actionable ISP projects. This is because:

- TNSPs may face challenges in raising capital to proceed with ISP projects
- the existing revenue framework is not sufficiently flexible to address financeability challenges that may arise in the future.

These issues are explained below and reflect the conclusions from the TPIR Stage 2 Final report.[14] Additional information is available in the rule change request.[15]

2.1.1 TNSPs may face challenges in raising capital to proceed with ISP projects

In our review of Stage 2 of TPIR we recognised that as part of the revenue setting framework, the regulatory depreciation revenue building block consists of straight line depreciation less the forecast indexation of capital. This feature contributes to financeability challenges because it can reduce cash flow early in the life of significant ISP projects. Providing flexibility in the revenue setting framework to alter the profile of revenue recovery can address cash flow issues without increasing the cost to customers over the life of the investment.

The TPIR Stage 2 final report concluded that there was currently no clear evidence of financeability issues with specific projects or TNSPs. However, we recognised that successive

13 AEMC, *Transmission Planning and Investment Review — Stage 2 Final Report*, 27 October 2023, p. 8.
14 AEMC, *Transmission Planning and Investment Review - Stage 2 Final Report*, 27 October 2023, pp. 8-9
15 Rule change request, pp. 1-3.

ISP iterations could see the timing of major transmission projects moved forward or bunched in a way that creates a risk of financeability issues arising in the future.[16]

A detailed description of the financeability challenge facing TNSPs in relation to ISP projects is explained in Appendix C.

2.1.2 The existing regulatory framework is not sufficiently flexible to address financeability challenges that may arise in future

The Minister agrees with the Commission's view from the TPIR Stage 2 Final report that the current regulatory framework in the NER is not sufficiently flexible to enable the AER to address potential financeability challenges when making revenue determinations.[17]

The AER has some flexibility under the current arrangements to adjust the profile of regulatory allowances, including through depreciation. However, further clarity is required on how the AER should assess and, if necessary, adjust depreciation profiles for ISP projects to address cash-flow concerns to support financeability.[18] For this reason, the TPIR Stage 2 final report recommended that the rules regarding depreciation for TNSPs be amended to provide the AER with the explicit discretion to vary the depreciation profile for an actionable ISP project, on a case-by-case basis, following a request for amendment from a TNSP.

The current framework for the return of capital through depreciation of transmission assets is set out in Box 1 below.

BOX 1: CURRENT RULES FOR DEPRECIATION OF TRANSMISSION ASSETS

Under the current framework, the return of capital through depreciation is set by the AER under clause 6A.6.3 of the NER. This requires the AER to:

- set depreciation profiles that reflect the nature of the assets or category of assets over their economic life, under clause 6A.6.3(b)(1)
- set economic lives, depreciation methodologies and rates underpinning the calculation of depreciation for a given regulatory control period consistently for the same type of assets, under clause 6A.6.3(b)(3)
- depreciate an asset (or group of assets) on a straight-line basis over the life of which that asset (or group of assets) was first included in the RAB where:
  - they are dedicated to one transmission network user (not being a distribution network service provider) or a small group of transmission network users, under clause 6A.6.3(c)(1)
  - the value of the assets (or group of assets), as included in the value of that RAB at the beginning of the first regulatory year of the current regulatory control period,

16 AEMC, *Transmission Planning and Investment Review — Stage 2 Final report*, 27 October 2023, p. 8.
17 Rule change request, p. 2.
18 AEMC, *Transmission Planning and Investment Review — Stage 2 Final report*, 27 October 2023, p. 9.

exceeds the indexed amount, at the commencement of that regulatory control period, of $20 million, under clause 6A.6.3(c)(2)

Where the requirements under clause 6A.6.3(c) to use straight-line depreciation do not apply, the AER may adopt a different approach. For example, where assets (or groups of assets) are not dedicated to one transmission network user and are valued at less than $20 million.

Based on the current list of ISP projects set out in Appendix B, this exception is unlikely to be relevant for most ISP projects. This is because the projects are expected to be major transmission projects that cost more than $20 million, and so would need to be depreciated on a straight-line basis under current clause 6A.6.3(c).

Where clause 6A.6.3(c) does not apply, the AER's view provided to the AEMC during the TPIR review was that it was unclear whether the AER's discretion extends to resolving financeability concerns by adjusting depreciation timing, even when this would best achieve the NEO.*

While clause 6A.6.3 refers to depreciation on a straight-line basis, the impact of inflation indexation can result in a negative depreciation allowance in the early years of an assets' life, negatively impacting cash flows for TNSP.

Source: AEMC.
Note: *AEMC, *Transmission Planning and Investment Review - Stage 2 Draft report*, 2 June 2022, p. 14.

2.2 The problem is material in relation to financeability challenges for ISP projects

The Minister's explanation of the financeability problem in the rule change request is consistent with the Commission's assessment in TPIR. The Minister considers that there is a material risk that successive ISPs result in a large amount of new investment for TNSPs, relative to their existing RABs.[19] The Minister suggests that this could place pressure on TNSPs cash flows and by extension their credit metrics, in the absence of alternative methods to address financeability challenges, such as sourcing financing from the Commonwealth, including through the RTN program.[20]

There is a material risk that successive ISPs result in a large amount of new investment for TNSPs, relative to their existing RABs. Appendix B shows that the order of magnitude of potential costs for ISP projects in AEMO's 2022 ISP Optimal development path (ODP), that may need to be financed in the future, could result in an approximate doubling of the existing RABs for some TNSPs. There are uncertainties regarding the magnitude of ISP costs that may need to be financed in the future, including (but not limited to) the reasons outlined below:

- some committed ISP projects have already been financed to some extent

19 Rule change request, p. 2.
20 Rule change request, p. 1.

- it is unknown whether decisions will be made to invest in actionable and future ISP projects in the future
- it is unknown whether future ISP projects will become actionable ISP projects
- the estimated range of costs for ISP projects are subject to refinement, for example due to a change in transmission route selection.

Given that the potential order of magnitude of ISP costs that may need to be financed in future is material, there is a foreseeable risk that TNSPs may face financeability challenges relating to actionable ISP projects. This may delay decisions to invest in actionable ISP projects.[21] If this occurs, it may:

- delay investment in new renewable generation and battery storage
- delay the transition to net zero
- impact the reliability and security of the power system, compared to more timely investment in ISP projects.

QUESTION 1: IDENTIFYING THE PROBLEM

Do stakeholders have any new information or views on the problem raised in this rule change request, having regard to what has already been consulted on and established in TPIR?

21 While the rule change request relates specifically to actionable ISP projects, there is the potential for projects that were classified as 'future ISP projects' in AEMO's 2022 ISP ODP to be re-classified as 'actionable ISP projects' in future versions of AEMO's ISP.

3 PROPOSED SOLUTION TO VARY DEPRECIATION THAT WE RECOMMENDED IN TPIR

This chapter sets out and seeks feedback on:

- the proposed solution in the rule change request, that we recommended in TPIR, to allow depreciation to be varied for actionable ISP projects
- the suitability of the proposed solution to resolve the problem raised in the rule change request
- the costs and benefits of the proposed solution
- how the proposed solution may be implemented.

3.1 Allowing depreciation to be varied for actionable ISP projects

The proposed solution is to amend the NER to enable the depreciation profile of assets that form part of an actionable ISP project to vary from the current approach under clause 6A.6.3 of the NER. We recommended this solution in TPIR.[22]

This section explains this proposal solution and following design matters related to it.

- How to assess financeability applications, including through the use of principles or a prescriptive test, and the appropriate level of AER discretion?
- Whether the financeability assessment should be at the TNSP RAB level or the ISP project level?
- How may the proposed solution apply in Victoria?
- What process and timing should apply to the assessment of a TNSP's request to vary depreciation?

3.1.1 Overview of the proposed solution to vary depreciation

To address the foreseeable risk that financeability challenges arise for TNSPs in relation to actionable ISP projects, the Minister proposes the following.[23]

- A TNSP may submit a request to the AER to vary the depreciation profile of an actionable ISP project.[24]
- The AER is provided with explicit discretion to vary the depreciation profile for actionable ISP projects.[25] The AER would assess TNSPs requests to vary the depreciation profile of ISP projects, on a case by case basis, and in doing so must have regard to a set of principles set out in the NER.[26]

22 AEMC, *TPIR Stage 2 — Final report*, 27 October 2022, p. 7.
23 These proposed changes reflect the recommendations in AEMC, *TPIR Stage 2 — Final report*, 27 October 2022, p. 7.
24 Rule change request, p. 4.
25 Rule change request, p. 3.
26 Rule change request, proposed rule 6A.6.3(f), p.13.

Further detail on design matters relating to the proposed solution are set out in sections 3.1.2 to 3.1.5 below.[27]

3.1.2 How to assess financeability applications

There are three aspects related to the AER's assessment of financeability applications from TNSPs for actionable ISP projects:

- whether the assessment should be based on principles or a prescriptive approach
- what level of discretion should be provided to the AER
- what factors should be taken into account in the assessment.

For context, Box 2 below provides an overview of the level of flexibility provided to the AER to depreciate electricity transmission and distribution assets, and gas pipeline assets, under the current provisions of the NER and National Gas Rules.

BOX 2: CURRENT ARRANGEMENTS FOR DEPRECIATION OF GAS AND ELECTRICITY ASSETS

In relation to gas pipeline assets, in 2019 the AEMC made a rule to provide full discretion to the AER in relation to depreciation, when assessing access arrangement proposals from pipeline service providers. The final determination noted that regulatory decision-making would be improved through the removal of limitations on regulatory discretion applied to certain elements of an access arrangement.[(a)]

In relation to electricity transmission assets, the current regulatory framework is not sufficiently flexible to address financeability challenges that may arise in future. For more information, see section 2.1.2 of this consultation paper.

The current regulatory framework for depreciation of electricity distribution assets is similar to that for depreciation of electricity transmission, with some differences. NER clause 6.5.5 requires the AER to set depreciation profiles that reflect the nature of the asset or category of assets over their economic life. The AER has to set the economic life, depreciation methods and rates of depreciation consistently for the same type of assets. While the AER must depreciate transmission assets on a straight-line basis under clause 6A.6.3(b) (and take into account inflation indexation which can result in a negative regulatory depreciation allowance), assets that have been included in a TNSP's RAB that are valued at more than $20 million, there is no such requirement in relation to assets that have been included in DNSP's RABs.

Source: AEMC.
Note: (a) AEMC, *Regulation of covered pipelines*, Final determination, 14 March 2019, p. ii.

27 We note that the proposed rule does not include three amendments to the NER that were included in the recommended rule drafting accompanying the TPIR Stage 2 draft report. These are amendments to NER clauses S6A.1.3(7)(ii), S6A.1.3(7)(iv) and to insert a definition of 'initial request' in Chapter 10 of the NER, as outlined in: AEMC, *Proposed Rule changes - TPIR Stage 2*, p.8. The Minister has confirmed that these amendments were intended to be included in the proposed rule so it was the same as that recommended in TPIR Stage 2 draft report.

Should the assessment be based on principles or a prescriptive approach?

The rule change request seeks to implement a process where a TNSP planning to carry out an actionable ISP project may apply to the AER to vary the depreciation profile of for assets related to that specific project. This creates a decision-making process for the AER who must consider the application.

The Minister considers that the AER should assess financeability applications from TNSPs to vary the depreciation profile for actionable ISP projects using a principles-based approach, as this would provide flexibility to address the financeability challenges on a case-by-case basis.[28]

However, the Minister also notes that, in this rule change process, the Commission should consider the use of principles vs a prescriptive test for assessing whether to vary the depreciation profile for an actionable ISP project.[29] This question has previously been considered during TPIR.[30] However, further consideration of whether to apply a principles-based approach or a prescriptive test will be part of this rule change process with reference to the rule drafting philosophy.

What level of discretion should be provided to the AER?

The issue of using a principles or prescriptive approach for the AER's assessment of a TNSP's depreciation application, is related to the issue of the appropriate balance between providing flexibility for the AER through a principles-based approach and providing greater certainty for TNSPs and their investors through a prescriptive test. The implications of applying each of these approaches may be as follows:

- Greater AER discretion: The AER has discretion to assess financeability applications based on a set of principles. For example, these principles could include qualitative and quantitative factors that the AER may take into account.
- Limited or no discretion for the AER:
  - For example where a prescriptive financeability test is set out in the NER that must be applied by the AER. A prescriptive approach could direct the AER to consider either or both qualitative and quantitative factors. This type of approach may not provide any discretion for the AER to take into account other factors, such as other decisions on building blocks that impact overall revenue for TNSPs and overall transmission prices that form part of consumer's electricity prices.
  - Alternatively, some discretion may be provided to the AER by specifying certain factors that must be considered and others that may be taken into account when making a decision. For example, these factors could include any one of the principles proposed in this rule change request and/or any other factors, such as whether a TNSP has received concessional finance for an actionable ISP project.

28 Rule change request, pp. 2; 5.

29 ibid, p. 6.

30 See Appendix A for an outline of previous stakeholder views on this issue.

What factors should be taken into account in the assessment?

The Minister proposes that the AER should assess financeability applications from TNSPs to vary the depreciation profile of actionable ISP projects using three principles to be set out in an amended clause 6A.6.3(f) of the NER. These principles are outlined in Box 3 below.[31]

BOX 3: PROPOSED PRINCIPLES TO ASSESS FINANCEABILITY

Principle 1: The relative consumer benefits (having regard to the reliability and price risk associated with transmission delivery delays) from the provision of network services over time (the inter-generational equity principle).

Principle 2: The capacity of the TNSP to efficiently finance its overall RAB, including efficient capital expenditure (which focuses on the capacity to finance a project at the network business level, rather than at the project level).

Principle 3: Any other factors the AER considers relevant, having regard to Principles 1 and 2.

Source: Rule change request, p. 5.

These principles are similar to, but slightly different from, the principles recommended in the TPIR Stage 2 Final report. The rule drafting for Principle 1 in clause 6A.6.3(f)(1) of the proposed rule[32] is the same as the rule drafting for clause 6A.6.3(f)(1) recommended in TPIR.[33]

However, the rule change request also links Principle 1 to the reliability and price risk associated with transmission delivery delays.[34] In the TPIR Stage 2 Final report, Principle 1 related to allowing a project to proceed in a timely manner so that consumer benefits could be unlocked however it did not refer to reliability and price risk.[35]

There are a range of other factors that could be used by the AER to assess financeability applications which may include (but not be limited to):

- funds from operations (FFO)/net debt
- FFO/RAB
- FFO interest coverage
- net debt/RAB
- whether any concessional finance has been provided to the TNSP for that ISP project.

We note that, the concept of a 'benchmark efficient entity' is used by the AER to derive the Weighted average cost of capital (WACC) for an efficient service provider. For the efficient

31 Rule change request, pp. 6-7.
32 Rule change request, p. 14.
33 AEMC, *Proposed rule change — TPIR Stage 2*, 27 October 2022, pp. 4.
34 Rule change request, p. 6.
35 AEMC, *TPIR Stage 2 — Final report*, 27 October 2023, p. 12.

cost of capital to be achieved, it should be based on the benchmark efficient entity's capital structure, which is currently assumed to be 60 per cent debt and 40 per cent equity.

Section 3.1.3 below provides further information and questions in relation to principle 2, which proposes that the financeability assessment is at the TNSP RAB level and not at the ISP project level.

> QUESTION 2: HOW TO ASSESS FINANCEABILITY APPLICATIONS
>
> (a) Should TNSPs have to submit an application to the AER to vary the depreciation profile of actionable ISP projects? If so, what information should this include?
>
> (b) Should the AER vary the depreciation profile of actionable ISP projects using principles or a prescriptive approach?
>
> (c) What level of AER discretion is appropriate?
>
> (d) Do you consider that the proposed principles are appropriate? Should any other assessment factors be taken into account?

3.1.3 Should the financeability assessment be at the TNSP RAB level or project level?

The proposed rule specifies that the AER's financeability assessment is undertaken at the TNSP RAB level and not the ISP project level and notes:

- This approach is in line with the AER's requirements to have regard to the regulated network business as a whole when setting the regulated revenue TNSPs can recover, under NER clause 6A.1.1[36]
- It reflects the TPIR Stage 2 Final report which notes that the core parts of the regulatory framework reflect economic assessment at the regulated network business level. For example, the allowed rate of return is set for regulated network service providers and not individual projects. The revenue and pricing principles also make it clear that it is the "regulated network service provider" that "should be provided with a reasonable opportunity to recover at least efficient costs".[37]

The Minister notes that, in this rule change process, the Commission should consider whether the assessment of an application to vary the depreciation profile for an actionable ISP project is at the regulated business level or the project level.[38]

> QUESTION 3: LEVEL OF FINANCEABILITY ASSESSMENT
>
> (a) Should the financeability assessment be at the TNSP RAB level or the ISP project level?

36 Rule change request, p. 6.
37 Rule change request, p. 7.
38 ibid, p. 6.

3.1.4 Application of the proposed solution in Victoria

The rule change request proposes to provide greater flexibility to vary depreciation for actionable ISP projects in the NEM.

Transmission arrangements are different in Victoria from other jurisdictions in the NEM. Victoria is the only jurisdiction in the NEM where AEMO has declared network functions. Under the contestable framework in Victoria, transmission network planning functions are separated from network ownership and operation so that the functions undertaken by TNSPs elsewhere are split between AEMO and Victorian declared transmission system operators:

- AEMO is responsible for planning and procuring the augmentation of the Victorian shared transmission network.
- Declared transmission system operators (DTSOs) own and operate transmission infrastructure. AusNet is the principal DTSO in Victoria.[39]

The rule change request does not comment on whether there may be a need for different arrangements to apply in Victoria. However, this may be relevant in relation to the application of the rule (if made) for Victoria, including whether the rules should clarify any functions or responsibilities between AEMO and DTSOs in Victoria.

3.1.5 What process should apply for the financeability assessment?

The process proposed by the Minister to apply for a financeability assessment is based on the process we proposed in TPIR.

Clause 6A.6.3 of the proposed rule sets out the following steps related to the assessment of a financeability application:

- A TNSP may, prior to submitting a request to vary the depreciation profile of assets that form part of an actionable ISP project, submit a request (an initial request) to the AER to develop and publish an issues paper that:
  - provides an indication on whether to vary the depreciation profile of an asset (or group of assets)[40] and, if so, may indicate a range of depreciation profiles; and
  - identifies key matters that the AER considers necessary to have regard to in making a determination under proposed new clause 6A.6.3(d) for the asset (or group of assets).
- An initial request must be made no earlier than six months, and no later than four months, prior to the TNSP submitting an application under clause 6A.8.2(a) in relation to the relevant asset (or group of assets).
- If a TNSP makes an initial request under proposed new clause 6A.6.3(h), the AER must develop and publish an issues paper on the initial request within two months of receiving the initial request:

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39 In 2021, AusNet owned and operated 99 per cent of Victorian shared transmission network assets. AusNet Services, *Submission to Draft Determination: Efficient management of system strength on the power system rule change*, 17 June 2021. As of 17 December 2020, the DTSOs owning, controlling or operating sections of the Victorian declared transmission system included AusNet Services, TransGrid (operating as NSW Electricity Networks Operations Pty Ltd), TransGrid Services, Rowville Transmission Facility Pty Ltd, Transmission Operations (Australia) Pty Ltd and Transmission Operations (Australia) 2 Pty Ltd.

40 Rule change request, proposed clause 6A.6.3(d)

- The AER may request from the TNSP additional information or analysis that the AER considers reasonably necessary to assist it in publishing an issues paper under proposed new clause 6A.6.3(j)
- If the AER requests additional information or analysis under proposed new clause 6A.6.3(k), then the period of time for publishing an issues paper under proposed new clause 6A.6.3(j) is automatically extended by the period of time it takes the TNSP to provide the additional information or analysis to the AER.
- A request to vary the depreciation profile of assets that form part of an actionable ISP project under proposed new clause 6A.6.3(d), must be made at the same time as submitting a contingent project application (CPA) under clause 6A.8.2(a)

> QUESTION 4: FINANCEABILITY ASSESSMENT PROCESS AND TIMING
>
> Is the proposed process and timing to assess requests to vary depreciation for actionable ISP projects practical and efficient? If not, what alternative processes and timings do you suggest be specified in the NER?

3.2 Suitability of the proposed solution?

The Minister suggests that the proposed solution will resolve the problem raised in the rule change request.

To date TNSPs have sought alternative methods to address their financeability challenges, such as sourcing financing from the Commonwealth, including through the Rewiring the National program.[41]

The Minister expects that, if this rule is made, the AER's ability to vary the depreciation profiles for actionable ISP projects inside the regulated revenue framework would be the primary mechanism that TNSPs could use to address any financeability issues they may have.[42]

If the rule was made, it would provide the AER with greater flexibility to address financeability challenges related to actionable ISP projects, if they exist, by varying the profile and timing of regulatory allowances, to address cash flow concerns.[43]

While the Commission has considered the issue of financeability challenges arising for TNSPs in relation to building actionable ISP projects, there may be alternatives to the solution set out by the Minister in the rule change request. These alternative solutions could be outside the NER.

41 *Rule change request*, p.1.
42 ibid.
43 ibid, p. 2.

> QUESTION 5: WILL THE PROPOSAL RESOLVE THE PROBLEM?
>
> (a) Will the proposed solution to vary depreciation profiles resolve the problem raised in the rule change request? Would it reduce or eliminate the need for concessional finance from governments for ISP projects?
>
> (b) Are there any alternative solutions that would resolve the problem and be more preferable and aligned with the long-term interests of consumers?

3.3 What implementation issues might there be?

If the Commission were to make a rule change based on one or more of the proposed solutions in the rule change request, as described in sections 3.1, 3.2 and 3.3 of this consultation paper, it must then consider how that rule is to be implemented. These considerations include:

- whether the AER should prepare guidance material on the new rule
- if transitional arrangements are needed.

3.3.1 Should the AER be required to develop guidelines about the rule?

The Minister proposes that the AER develop guidelines that could provide further information in the rules change request. The proposed rules state that the AER may develop guidelines on:[44]

- the approach the AER proposes to use to make a determination under clause 6A.6.3(d) for a TNSP to vary the depreciation profile of an asset (or group of assets) that form part of an actionable ISP project;
- the information the AER requires for the purposes of that determination
- the information the AER requires for the purposes of developing and publishing the issues paper in accordance with clause 6A.6.3(h)
- any other matters the AER considers appropriate.

In TPIR Stage 2, our final recommendation was to introduce depreciation principles in the rules and that it was not necessary to include a rule obligation for the AER to issue a guideline. However, given the complexity of this issue and considerable stakeholder interest, we indicated that the AER may make such guidelines.[45]

> QUESTION 6: AER GUIDANCE
>
> Should the AER be required to publish guidance on how it may vary the depreciation profile

44 Rule change request, p. 4; proposed clause 6A.6.3(g), p. 14.
45 AEMC, TPIR Stage 2 — Final report, p. 14.

for assets that form part of an actionable ISP projects?

3.3.2 Are any transitional arrangements needed?

Transitional arrangements may be needed to support the effective implementation of a rule. Such arrangements may be needed for the AER, TNSPs or any other stakeholder, to support predictable and stable management of the economic regulatory framework.

Time to develop AER guidance

The solution proposed in the rule change request is to include principles in the NER to enable the AER to assess applications to vary the depreciation profile of assets used in an actionable ISP project. The AER can make an assessment based on these principles and as soon as the rule is made. [46]The rule can then be supplemented by any guidance developed by the AER. This approach would enable the reform to be implemented more rapidly than if such AER guidance had to be developed first.

In TPIR Stage 2, we noted that we expected that the AER would publish any depreciation guideline approximately nine months after the relevant changes to the NER. This would provide stakeholders with the opportunity to engage in the process of developing this guideline. This would not prevent TNSPs from requesting a change in depreciation as soon as the new rules are published. This approach to implementation is consistent with stakeholder views, which emphasised the importance of giving effect to the reform quickly and the potential costs associated with delaying transmission projects.[47]

The rule change request does not specify when the rule proponent considers that AER should publish its guidance document.

Amending AER models

The rule change request does not comment on the need to amend any AER models to implement this proposed solution. However, the proposed solutions may require amendments to the AER's models, such as the PTRM and/or the Roll forward model (RFM), which are used for TNSP revenue determinations. These amendments may be:

- temporary to enable a rule (if made) to commence operation as soon as possible after this rule change process, and/or
- permanent to support the ongoing implementation of a rule (if made).

Interactions with other reforms

The proposed solution may interact with other NER changes or reforms, such as the any rule made as a result of the Concessional finance rule change request that the AEMC is currently considering.

46 Rule change request, p. 8.
47 AEMC, TPIR — Stage 2 Final Report, p. 15.

QUESTION 7: TRANSITIONAL ARRANGEMENTS

(a) If the proposed rule is made, should the AER be required to develop any guidance, or amend any AER models, before or after the commencement of the rule? If so, what level of prescription should be included in the NER?

(b) If the proposed rule is made, should it provide a transitional period to enable market participants to prepare? If so, how long should such a transitional period be?

(c) Is there a need for any transitional arrangements to assist with managing interactions other NER amendments or other market reforms? If so, what?

4 PROPOSED SOLUTIONS ON BIODIVERSITY OFFSETS THAT WE DID NOT RAISE IN TPIR

This section discusses proposed solutions to address financeability issues that we did not raise in TPIR, but were raised by the Minister in the rule change request. These relate to:

- recognising and managing biodiversity offset costs
- clarifying the treatment of depreciation for asset classes, including biodiversity offsets.

4.1 Recognising and managing biodiversity offset costs

This section discusses:

- biodiversity offset arrangements across jurisdictions of the NEM
- allowing TNSPs to depreciate biodiversity offsets to be recovered on an as incurred basis
- whether the biodiversity offset depreciation should also apply to intending TNSPs (ITNSPs).

4.1.1 Biodiversity offset arrangements across jurisdictions of the NEM

A number of TNSPs may have incurred (or may incur in the future) biodiversity offset costs to meet their biodiversity conservation obligations under state legislation.

For example, the *Biodiversity Conservation Act 2016* in NSW establishes the Biodiversity Offset Scheme (BOS). Under the BOS, applications for development or clearing approvals must set out how impacts on biodiversity will be avoided and minimised. The remaining residual impacts can be offset by the purchase and/or retirement of biodiversity credits or payment to the Biodiversity Conservation Fund.[48]

Transgrid has incurred biodiversity offset costs in relation to Project EnergyConnnect and Humelink under this scheme, as explained in section 4.1.2 below.

The *Native Vegetation Act 1991 (SA)* and associated regulations in South Australia establishes a framework for preserving and enhancing native vegetation. Parties who modify native vegetation may be required to offset the impacts on biodiversity resulting from any clearance activity. As a result, ElectraNet has incurred biodiversity offset costs in relation to Project EnergyConnect, as explained in section 4.1.2 below.

> QUESTION 8: BIODIVERSITY OFFSET ARRANGEMENTS ACROSS NEM JURISDICTIONS
>
> Are the costs of meeting biodiversity obligations material? Are they likely to impact financeability of actionable ISP projects?

48 Part 6 of the *Biodiversity Conservation Act 2016* (NSW).

4.1.2 Proposed solution

In the rule change request, the Minister suggests that TNSPs' costs of meeting biodiversity conservation obligations for ISP projects are expected to:[49]

- account for a material proportion of overall ISP project costs
- materially impact the financeability of ISP projects, in the absence of being depreciable.

For these reasons, the Minister suggests that TNSPs should be able to commence recovery of depreciation for biodiversity offset costs, on an as incurred basis, during construction of an ISP project.[50]

The Minister suggests that the NER should be amended so the AER has discretion to vary depreciation for biodiversity offsets (where it will promote the NEO). This would mean that TNSPs do not need to apply to vary depreciation for biodiversity offsets. This is different from the proposed approach for other assets of an actionable ISP project, for which TNSPs would need to apply to the AER to vary depreciation.[51]

The Minister suggests that depreciation of biodiversity offset costs for ISP projects should start to be recovered earlier than other asset classes that comprise an ISP project because:[52]

> The utility of biodiversity offsets begins when construction - which disturbs the natural environment - commences and the biodiversity offset ensures a degree of protection for the impacted species. This early public utility as compared to other asset classes gives merit to commencing depreciation of biodiverse offsets during construction, but only where doing so contributes to achievement of the NEO.

The Minister considers that depreciating biodiversity offsets on an as-incurred basis could promote the NEO on the basis that:[53]

> It could overcome or mitigate TNSPs financeability concerns in a Net present value (NPV) neutral manner, particularly in the period before the changes subject to this rule change can be applied to major ISP projects.
>
> Depreciating biodiversity offsets on an as incurred basis could promote the NEO in a number of ways, for example:
>
> - Reduce (both upfront and retrospectively) the amount of Rewiring the Nation funding used to address TNSPs' financeability concerns. The use of Rewiring the Nation funding to address financeability concerns is not NPV neutral; it provides a financial benefit to the TNSP. This financial benefit, however, could have otherwise been used to lower electricity consumers' costs had it not been needed to address financeability.

49 Rule change request, p. 4.
50 Rule change request, p. 5.
51 ibid.
52 ibid.
53 ibid.

The rule change request notes that there have been cases where biodiversity offsets have not been treated as a depreciating asset class. The Minister suggests that treating biodiversity as a non-depreciable asset class results in lower cash flow for TNSPs in the initial stages of a project, potentially resulting in financeability issues.[54]

The Commission seeks feedback on the rule change proposal. In addition to the information provided in the rule change request, we note that TNSPs may have options to efficiently meet their biodiversity conservation obligations. For example in NSW, TNSPs may purchase land for biodiversity offsets or make payments to the Biodiversity Conservation Fund.[55]

The following additional information is related to the proposed solution to allow TNSPs to recover depreciation of biodiversity offset costs on an as incurred basis.

- **Current requirements for depreciation schedules:** Under current clause 6A.6.3(b)(1) of the NER, depreciation schedules must depreciate using a profile that reflects the nature of the assets or category of assets over the economic life of that asset or category of assets.
- **Biodiversity conservation obligations on TNSPs:** Enabling biodiversity offset costs to flow through to consumers prior to the use of an asset needs to be considered with regard to the operation of the relevant biodiversity scheme. For example, in NSW, TNSPs undertaking development activities are required under state legislation to purchase Biodiversity Offset Credits where there are unavoidable biodiversity impacts arising from the development of infrastructure assets. Under such arrangements, development consent may not be granted and work cannot be progressed on these projects until such time as the TNSP has met all of its requirements under the scheme.[56] The implication of development consent not being granted on the regulatory framework has not been discussed in the rule change request.
- **Materiality of biodiversity offset costs:** There is uncertainty around biodiversity offset costs, which vary greatly between ISP projects. Some estimates of biodiversity offset costs for ISP projects are material:
  - **Humelink:** Transgrid's estimated environmental offset costs[57] of $935m or around 28 per cent of the total estimated cost of $3,317m for Humelink.[58]
  - **Project EnergyConnect:**
    - Transgrid: the AER approved environmental offset costs[59] of $125m or around 7 per cent of the AER's total forecast expenditure of $1,818m for Project EnergyConnect.[60]

54 ibid.

55 Under Part 6 of the *Biodiversity Conservation Act 2016* (NSW).

56 Part 7 of the *Biodiversity Conservation Act 2016 (NSW).*

57 In NSW, environmental offset costs relate to biodiversity offset costs.

58 Based on Option 3C. Transgrid's assessment in the Project Assessment Conclusions Report (PACR) was that Option 3C provides the greatest net benefits across all scenarios. These costs are estimated and are subject to change in the Humelink CPA stage two for construction, the process for which has not yet commenced. Transgrid, *Reinforcing the NSW Southern Shared Network to increase transfer capacity to demand centres (HumeLink)*, Project Assessment Conclusions Report, 29 July 2021, pp. 5; 29.

59 In NSW, environmental offset costs relate to biodiversity offset costs.

60 AER, *Final decision - Transgrid Contingent Project - Project EnergyConnect*, May 2021, p. 1; 16.

  - ElectraNet: the AER approved environmental offset costs[61] of $3m or around 1 per cent of the AER's total forecast expenditure of $457m for Project EnergyConnect [62]

- **Project completion risk**:
  - If TNSPs are allowed to start recovering depreciation for biodiversity offset costs before the ISP project has been completed, this would re-allocate ISP project completion risk from TNSPs to consumers. The rule change request does not set out any reasoning as to why this would be appropriate, nor does it consider how this risk could be managed in the regulatory framework.
  - We note that, in 2021, we decided not to make participant derogations to apply depreciation on an as incurred basis, as it would transfer completion risk from Transgrid and ElectraNet to consumers, who are not best placed to manage these risks. Our 2021 decisions were in relation to a broader application of depreciation on an as incurred basis, across all assets in an ISP project, whereas this rule change request only relates to biodiversity offsets and not other assets that form part of an ISP project.[63]

Box 4 below sets out the current rules for recovery of depreciation as incurred for network service providers.

BOX 4: CURRENT RULES FOR RECOVERY OF DEPRECIATION AS INCURRED FOR NETWORK SERVICE PROVIDERS

TNSPs

Chapter 6A of the National Electricity Rules (NER) covers economic regulation of transmission services. This chapter is silent on recovery of depreciation as incurred for TNSPs.

However, we note the following provisions cover depreciation for TNSPs in the NER.

- Clauses 6A.4.2(a1), 6A.5A(b)(3), 6A.6.7, 6A.14.1(5E) and S6A.2.2B variously state that the revenue proposal and decision specify whether depreciation for establishing the RAB at the commencement of the following regulatory control period is to be based on actual or forecast capital expenditure.
- Clause 6A.6.3(a) states that depreciation for a regulatory year is calculated on the value of assets included in the RAB at the beginning of that regulatory year.
- Clause 6A.5.4(a)(3) states that depreciation is one of the 'building blocks' that forms the revenue allowance.
- Clause 6A.5.3 provides further details of how the building blocks are calculated and timing is specified in the AER's post-tax revenue model (PTRM).

61 In South Australia, environmental offset costs relate to biodiversity offset costs.
62 AER, *Final decision - ElectraNet Contingent Project - Project EnergyConnect*, May 2021, pp. 1; 12.
63 For more detail, refer to Appendix A.

The NER does not specifically prevent depreciation to be recovered from assets on an 'as incurred' basis. In practice, the AER may consider regulatory accounting methods to assist it in determining whether using as incurred would be appropriate for the particular circumstances.

DNSPs

Chapter 6 of the NER covers economic regulation of distribution services. This chapter is silent on recovery of depreciation as incurred for DNSPs.

Chapter 6 of the NER is the same as Chapter 6A of the NER in relation to key provisions on depreciation.

We note that the AER has allowed recovery of depreciation on an as incurred basis in relation to distribution assets. For example the AER's final decision on Ausgrid's RAB for the 2014-19 regulatory control period was based on as incurred capex.*

Source: AEMC
Note: AER, Final decision - 2019-24 Ausgrid Distribution Determination: Attachment 2 Regulatory Asset Base, Table 2.1, footnote c, p. 8.

QUESTION 9: RECOGNISING AND MANAGING BIODIVERSITY OFFSET COSTS

(a) Does the AER already have discretion to do what the rule change request is proposing (i.e. applying depreciation as incurred for transmission assets)?

(b) Should land purchased specifically for the purpose of meeting biodiversity offset obligations be depreciable? Should other costs of meeting biodiversity offset obligations be depreciable?

(c) Do you agree or disagree that recovering depreciation of biodiversity offset costs as incurred (as opposed to as commissioned), would be an appropriate solution to the financeability problem? Does this re-allocate completion risk from TNSP's to consumers?

(d) Are the nature of biodiversity offsets different from other assets that comprise a specific actionable ISP project, such that biodiversity offsets should be depreciated on a different basis to other assets?

4.1.3 Depreciating biodiversity offsets costs by intending TNSPs

In December 2022, the AEMC made a rule that clarified the ability of the AER to establish a revenue determination for an entity that is intending to become, but is not yet, a TNSP (an intending TNSP (ITNSP)).[64] The final rule:

64 An ITNSP is an Intending Participant or Market Network Service Provider who intends to provide prescribed transmission services. AEMC, *Final determination — Establishing revenue determinations for Intending TNSPs*, 22 December 2022, p. 11.

- allowed ITNSPs to capitalise the return on capital using the rate of return instrument (RORI) during the period before an ITNSP starts recovering revenue for the provision of prescribed transmission services
- did not allow ITNSPs to recover the return of capital (depreciation) during the period before an ITNSP starts recovering revenue for the provision of prescribed transmission services.

In this rule change, the proposed solution would allow depreciation of biodiversity offsets to be recovered on an as incurred basis for TNSPs, however it does not comment on whether this may also apply to ITNSPs. This is an issue that could be clarified in the NER.

To assist consideration of this issue, Table 4.1 sets out the arrangements for return on capital and return of capital (depreciation) as incurred during construction, and after prescribed transmission services start to be provided, for TNSPs and ITNSPs.

Table 4.1: Current, proposed and alternative depreciation arrangements for TNSPs and ITNSPs

	ISP PROJECT UNDER CONSTRUCTION	ISP PROJECT COMPLETE AND PROVIDING PRE-SCRIBED TRANSMISSION SERVICES
Current arrangements for ITNSPs	• May capitalise the return on capital into the RAB, but are not paid until start providing prescribed transmission services. • Can not recover depreciation.	Can recover return on capital and depreciation, as the ITNSP is then a TNSP.
Minister's proposed solution to vary depreciation and allow TNSPs to recover depreciation of biodiversity offset costs as incurred.	Allow TNSPs to recover depreciation for biodiversity offsets costs as incurred.	Can recover return on capital and depreciation. Can vary the depreciation profile, if proposed rule is made.
If the Minister's proposed solution above was expanded to also allow ITNSPs to recover depreciation of biodiversity offset costs as incurred. This alternative arrangement was not raised in the rule change request.	• Allow TNSPs to recover depreciation for biodiversity offsets costs as incurred. • Allow ITNSPs to capitalise into the RAB the depreciation of biodiversity offsets costs as incurred, but not be paid until start providing	TNSPs and ITNSPs (then TNSPs) can: • recover return on capital and depreciation; and • vary the depreciation profile.

	ISP PROJECT UNDER CONSTRUCTION	ISP PROJECT COMPLETE AND PROVIDING PRE-SCRIBED TRANSMISSION SERVICES
	prescribed transmission services.	

Source: AEMC.

> QUESTION 10: APPLICATION OF PROPOSED SOLUTION TO INTENDING TNSPS
>
> If TNSPs are able to recover depreciation of biodiversity offsets on an as incurred basis, should this be extended to intending TNSPs?

4.2 Clarifying the treatment of depreciation for asset classes

The rule change request proposes that the AER should be required to explicitly outline how depreciation is expected to be applied for actionable ISP projects:[65]

- for different types of assets, including biodiversity offsets
- in circumstances where financeability challenges are, and are not, present.

The rule change request suggests that if amendments to the NER regarding biodiversity offsets are also made, then the AER should explicitly outline in guidelines how and when depreciation is expected to be applied to different asset classes, including biodiversity offsets.[66] This is not included in the proposed rule.

Amendments to the NER to this effect are intended to promote transparency and provide greater certainty of revenues to TNSPs as well as costs to consumers.[67]

The current arrangements are:

- TNSP's assets must be depreciated based on depreciation schedules that use a profile that reflects the nature of the assets or category of assets over the economic life of that asset or category of assets.[68]
- TNSPs asset's are depreciated by asset classes, for each regulatory year, in the AER's post tax revenue model (PTRM).

65 *Rule change request*, p. 4.
66 *Rule change request*, pp. 3-4.
67 Rule change request, p. 4.
68 NER clause 6A.6.3

QUESTION 11: CLARIFYING DEPRECIATION TREATMENT OF ASSET CLASSES

(a) Do you agree with the proposal to require the AER to explicitly outline how depreciation would apply to all asset classes in actionable ISP projects? Should this include biodiversity assets?

(b) If you agree that the deprecation treatment of asset classes should be documented, how should it be implemented — through the NER, AER guidelines and/or other methods?

5 MAKING OUR DECISION

When considering a rule change proposal, the Commission considers a range of factors. This chapter outlines:

- issues the Commission must take into account
- the proposed assessment framework
- decisions the Commission can make
- rule-making for the Northern Territory.

5.1 The Commission must act in the long term interests of consumers

The Commission is bound by the National Electricity Law (NEL) to only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective.

The NEO is:[69]

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

5.2 We must also take these factors into account

The Commission must take into account the revenue and pricing principles set out in section 7A of the NEL in making certain rules.[70] Relevantly for this rule change request, we must take those principles into account in making rules with respect to the determination by the AER, for the purpose of making a transmission determination with respect to services that are the subject of such a determination, of allowances for depreciation.[71]

The Commission considers the following revenue and pricing principles are the most relevant to this rule change request:

- A regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in—(a) providing direct control network services; and (b) complying with a regulatory obligation or requirement or making a regulatory payment.[72]
- A regulated network service provider should be provided with effective incentives in order to promote economic efficiency with respect to direct control network services the operator provides. The economic efficiency that should be promoted includes efficient

69 Section 7 of the NEL
70 Section 88B of the NEL refers to items 15 to 24 of the NEL, which cover transmission system revenue and pricing.
71 NEL schedule 1 item 22.
72 Section 7A(2) of the NEL

investment in a distribution system or transmission system with which the operator provides direct control network services[73]

- Regard should be had to the regulatory asset base with respect to a distribution system or transmission system adopted—(a) in any previous—(i) as the case requires, distribution determination or transmission determination; or (ii) determination or decision under the National Electricity Code or jurisdictional electricity legislation regulating the revenue earned, or prices charged, by a person providing services by means of that distribution system or transmission system; or (b) in the Rules.[74]
- A price or charge for the provision of a direct control network service should allow for a return commensurate with the regulatory and commercial risks involved in providing the direct control network service to which that price or charge relates.[75]
- Regard should be had to the economic costs and risks of the potential for under and over investment by a regulated network service provider in, as the case requires, a distribution system or transmission system with which the operator provides direct control network services.[76]

5.3 We have three options when making our decision

After using the assessment framework to consider the rule change request, the Commission may decide:

- to make the rule as proposed by the proponent[77]
- to make a rule that is different to the proposed rule (a more preferable rule), as discussed below, or
- not to make a rule.

The Commission may make a more preferable rule (which may be materially different to the proposed rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule is likely to better contribute to the achievement of the NEO.[78]

5.4 Proposed assessment framework

The Commission has identified the following criteria to assess whether the proposed rule or a more preferable rule is likely to contribute to the achievement of the NEO. These are:

Outcomes for consumers:

- Does the proposal provide a reasonable balance between the benefits and costs borne by near-term and later-term consumers? Is the proposed inter-generational principle robust and practical?

73 Section 7A(3) of the NEL.
74 Section 7A(4) of the NEL
75 Section 7A(5) of the NEL
76 Section 7A(6) of the NEL
77 Rule change request, pp. 13-20.
78 Section 91A of the NEL.

Principles of good regulatory practice:

- Does the proposal provides a stable and predictable framework for TNSPs, investors, consumers and the AER?
- Whether the implementation of the proposed rule provides appropriate transitional arrangements for the AER, TNSPs and stakeholders, to support predictable and stable management of the economic regulatory framework?

Principles of market efficiency

- Risk allocation: Would allowing TNSPs to recover the cost of depreciation for biodiversity offsets, as incurred during construction, appropriately allocate risk between TNSPs and consumers?
- Incentives: Would requiring the AER to clarify how different asset classes are to be depreciated, including biodiversity offsets, support incentives for TNSPs to deliver actionable ISP projects and provide prescribed transmission services at the lowest possible cost for consumers?

Decarbonisation

- Does the proposal support the financeability of actionable ISP projects in a timely manner, enabling new renewable generation and energy storage to deliver power to consumers more quickly, supporting decarbonisation of the NEM?

Reliability and security

- Does the proposal support the timely delivery of actionable ISP projects at an efficient cost, to enable the reliable and secure provision of energy to consumers over the long term?

> QUESTION 12: ASSESSMENT FRAMEWORK
>
> Do you agree with the proposed assessment framework? Are there additional principles that the Commission should take into account or are there principles that are not relevant?

5.5 The proposed rule would not apply in the Northern Territory

Parts of the NER, as amended from time to time, apply in the Northern Territory, subject to modifications set out in regulations made under the Northern Territory legislation adopting the NEL.[79]

The proposed rule would not apply in the Northern Territory, as it amends provisions in NER Chapter 6A and Chapter 10 that do not apply in the Northern Territory.[80] Consequently, the

79 National Electricity (Northern Territory) (National Uniform Legislation) Act 2015 (NT Act). The regulations under the NT Act are the National Electricity (Northern Territory) (National Uniform Legislation) (Modification) Regulations 2016.

80 Under the NT Act and its regulations, only certain parts of the NER have been adopted in the Northern Territory. The version of the NER that applies in the Northern Territory is available on the AEMC website at: https://energy-rules.aemc.gov.au/ntner.

proposed rule will not be assessed against additional elements required by the Northern Territory legislation.

5.6 Costs and benefits of the proposed solution

The Minister considers that the proposed solution in the rule change request — which includes providing greater flexibility for the AER to vary depreciation, clarifying the treatment of depreciation for asset classes (including biodiversity offsets), and allowing depreciation of biodiversity offsets to be recovered on an as incurred basis — will have the impacts outlined below.

The benefits identified in the rule change request rest on developing a flexible solution to address potential future financeability issues for actionable ISP projects.[81] In the Minister's view, this enables timely investment in transmission infrastructure for actionable ISP projects, which supports:

- placing downwards pressure on electricity prices[82]
- reducing adverse impacts on electricity prices as the electricity system transitions[83]
- the reliability and security of the supply of electricity[84]
- the transition to net zero.[85]

These potential benefits appear most relevant to electricity consumers (through electricity price impacts and the supply of electricity) and Australians more generally (through supporting the economy's transition to net zero). However, the potential impact on other participants in the electricity sector should also be considered.

The rule change request also sets out the following cost impacts:

- While varying depreciation of specific actionable ISP projects will not increase the total costs borne by consumers over the life of an asset, if the variation results in accelerated depreciation it could shift more of the costs to near-term consumers. However, in the Minister's view the proposed principles would require this to be balanced against the benefits of timely delivery of actionable ISP projects and the impacts on price, reliability and security.[86]
- The Minister acknowledges that there would be administrative and compliance costs arising from making the proposed rule for the AER and TNSPs. However, he considers that these costs would not be material, and the AER would only need to assess the financeability of actionable ISP projects where this is requested by the TNSP.[87]
- The AER:

81 *Rule change request*, p. 9.
82 ibid.
83 *Rule change request*, p. 8
84 ibid.
85 *Rule change request*, p. 9.
86 *Rule change request*, p. 9.
87 ibid.

- may incur costs in developing a guideline relating to varying depreciation profiles of actionable ISP projects[88]
- would incur costs as it must develop guidelines that explicitly outline how and when depreciation is expected to be applied.

The potential benefits appear most relevant to electricity consumers (through electricity price impacts and the supply of electricity) and Australians more generally (through supporting the economy's transition to net zero). The cost identified impact the AER and relevant TNSPs. However, there may be other impacts that the rule change request has not identified. In addition, the potential impacts on other participants in the electricity sector should also be considered in assessing whether making the proposed rule is consistent with the NEO.

88 *Rule change request*, p. 10.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
BOS	Biodiversity Offset Scheme
Commission	See AEMC
DTSO	Declared Transmission System Operator
ENA	Energy Networks Australia
FFO	Funds from operations
ITNSP	Intending TNSPs
ISP	Integrated System Plan
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NPV	Net present value
NSW EII Act	NSW Electricity Infrastructure Investment Act
NT	Northern Territory
ODP	Optimal development path
PACR	Project Assessment Conclusions Report
Proponent	The proponent of the rule change request
PTNSP	Primary TNSP
PTRM	Post tax revenue model
RAB	Regulatory asset base
REZ	Renewable Energy Zone
RFM	Roll forward model
RORI	Rate of Return Instrument
RTN	Rewiring the nation
TNSP	Transmission Network Service Provider
TPIR	Transmission Planning and Investment Review
WACC	Weighted average cost of capital

A PREVIOUS AEMC ENGAGEMENTS ON FINANCEABILITY OF ISP PROJECTS

This appendix provides background on:

- our consideration of financeability of ISP projects in two participant derogation rule changes
- our assessment of financeability in TPIR Stage 2 and our recommendation to provide the AER with explicit flexibility to vary depreciation to address financeability risk; and
- stakeholder views on financeability from TPIR Stage 2.

We note that, as outlined in section 3.1 of this consultation paper, we will further consider the appropriate level of discretion the AER should have to vary depreciation to address a financeability risk.

A.1 We considered financeability of ISP projects in two participant derogation rule changes

We considered related financeability issues in the Transgrid and ElectraNet participant derogation rule change requests.

In our final determinations on these rule change requests, published in 2021, we determined not to make Transgrid and ElectraNet's proposed participant derogation which would have allowed Transgrid and ElectraNet to bring forward revenue for its share of actionable ISP projects.[89]

In our final determination, we considered the proposed participant derogations to apply depreciation on an as incurred basis, rather than on an as commissioned basis. We decided not to make either rule as it would transfer completion risk from Transgrid and ElectraNet to consumers, who are not best placed to manage these risks.[90]

In these final determinations, we recognised that we could not be certain whether financeability issues would arise in the longer term. We decided that we would further consider financeability, among other issues relating to the timely and efficient delivery of ISP projects, in TPIR.[91]

A.2 We considered stakeholder views and provided recommendations on financeability in TPIR Stage 2

Transmission is a critical enabler for the transition to net zero, both in the NEM and for the economy more broadly. This transition will require an unprecedented level of investment in,

89 AEMC, Final determination — *Participant Derogation — Financeability of ISP Projects (TransGrid) and Participant Derogation — Financeability of ISP Projects (Electranet)*, 8 April 2021, pp.34-35

90 AEMC, *Final determination — Participant Derogation — Financeability of ISP Projects (TransGrid),* 8 April 2021, p. v.; and AEMC, *Final determination - Participant Derogation — Financeability of ISP Projects (Electranet)*, 8 April 2021, p. v.

91 AEMC, Final determination — *Participant Derogation — Financeability of ISP Projects (TransGrid) and Participant Derogation — Financeability of ISP Projects (Electranet)*, 8 April 2021, pp.34-35

and build of, transmission infrastructure to deliver power from renewable generation and energy storage to consumers, and to deliver it quickly. TPIR was to recommend improvements to the regulatory frameworks for transmission investment and planning to support efficient investment in and timely delivery of major transmission projects.[92] Financeability was an area of focus for Stage 2 of TPIR.

During our consultation with stakeholders in TPIR Stage 2, the issue of financeability was raised in relation to the concern that transmission investments could be delayed because incumbent TNSPs have an exclusive right to invest, but no clear corresponding obligation to invest.[93]

Financeability presented an important issue in the context of a rapidly transitioning power system.[94]

Given the complexity around the timing of major investments, we noted that cash-flow challenges may arise when a large amount of new investment relative to a TNSP's existing RAB occurs in a short period. In such circumstances, businesses may be unable to raise funds and adjust their capital structures within the required timeframe.

A.2.1 We recommended providing explicit flexibility to vary depreciation to address financeability risk

Our recommendation from the TPIR stage 2 final report was that the revenue-setting framework for TNSPs would benefit from increased flexibility to address the forseeable risk that financeability challenges may prevent future actionable ISP projects from progressing in a timely manner.[95]

Specifically, we proposed the following.[96]

- The AER should have explicit discretion to vary the depreciation profile of an actionable ISP project through a NPV neutral adjustment. Such a change would be considered on a case-by-case basis following a request from a TNSP. This would support the capacity of TNSPs to finance efficient capital expenditure associated with such major projects.
- The NER should include a set of principles to guide the AER's approach when determining requests to vary the depreciation profile for a specific actionable ISP project.

The three principles recommended were:[97]

- **Principle 1:** The relative consumer benefits from the provision of network services over time (inter-generational equity).
- **Principle 2:** The capacity of the network operator to efficiently finance its overall RAB, including efficient capital expenditure.

92 AEMC, *Final report — TPIR*, 4 May 2023, p. 1.
93 AEMC, *TPIR — Stage 2 Draft report*, 2 June 2022, p. 9.
94 AEMC, *TPIR — Stage 2 Draft report*, 2 June 2022, p. 10.
95 AEMC, *TPIR — Stage 2 Final report*, 27 October 2022.
96 ibid, p. 7 and p. 10
97 ibid, p. 11

- **Principle 3:** Any other factors the AER considers appropriate and which may not be captured by principles 1 and 2.

The principles seek to provide greater clarity regarding the criteria against which the AER would assess the need to vary depreciation. This would provide TNSPs with better information to develop their project plans and funding arrangements ahead of the AER's decision, supporting the timely delivery of transmission projects.[98]

We considered that the development of principles in the rules, rather than requiring the AER to develop principles in guidelines, improves certainty and enables faster implementation.[99]

- The AER should be able to make decisions to vary depreciation based on the depreciation principles in the NER without the need to first issue a guideline.
- The NER's principles could be supplemented with more detailed information in a guidance note at a later date. Enabling decisions to be made prior to finalising any sub-ordinate explanatory material regarding the new rules would allow the AER to undertake an assessment without having first issued a guideline, allowing these reforms to be implemented more quickly.

Additional information is set out in the AEMC's Stage 2 TPIR Final report.[100]

A.2.2 Summary of stakeholder views on financeability

This section sets out a summary of stakeholder views from TPIR Stage 2 on whether financeability challenges are likely to arise for ISP projects, the recommended solution developed through the review and alternative solutions to this potential issue. These stakeholder views have been provided for information purposes only, and will not be treated as submissions to this rule change process.

Stakeholders had wide-ranging views on whether financeability challenges may arise, as outlined below.

- Transgrid and Energy Networks Australia (ENA) stated that financeability challenges are already evident with ISP projects, pointing to the experience of Project EnergyConnect.[101] ENA rejected the AEMC TPIR Stage 2 draft report's characterisation that financeability concerns are only likely to occur in 'exceptional circumstances'.
- Some stakeholders agreed that financeability challenges may arise under future ISP scenarios given the scale, immediacy and/or sequencing of ISP investments.[102]
- Other stakeholders did not consider that financeability challenges are likely to arise. In their view, the regulatory framework already adequately supports investment and there is insufficient evidence to conclude otherwise.[103] Another believed that caution should be taken before drawing definitive judgements around financeability, as in principle the RAB

98 ibid, p. 11.
99 ibid, p. 15.
100 See: AEMC, TPIR Stage 2 — Final report, 27 October 2022: https://www.aemc.gov.au/sites/default/files/2022-10/stage_2_final_report.pdf
101 Submissions to the AEMC TPIR Stage 2 — Draft report: Transgrid p.1; ENA, p. 2
102 Submissions to the AEMC TPIR Stage 2 — Draft report: Re-alliance, p. 2; Tilt p. 2; AEMO, p. 3; CEFC p. 2.
103 Submissions to the AEMC TPIR Stage 2 — Draft report: AEC p.1; AGL p.1; EUAA p.4.

should serve as a sufficient guarantee of cashflows to allow any project to be financed, provided a TNSP receives its cost of capital.[104]

There were mixed views on whether depreciation should be varied to address financeability challenges, with the majority of stakeholders supporting this proposal.

- Of those stakeholders that considered financeability issues may arise in the future, the majority supported varying depreciation as the appropriate solution to address these challenges.[105]
- Some stakeholders raised reasons why depreciation should not be varied. These included potential consequences for inter-generational equity[106] and the view that varying depreciation may be a narrow solution, given that financeability issues may relate to a broader range of factors such as the rate of return.[107]

Stakeholders supported providing the AER with discretion to vary depreciation, as outlined below.

- The majority of stakeholders supported providing the AER with the ability to exercise discretion and have flexibility when considering requests to vary depreciation profiles.
- Transgrid considered that a prescriptive approach would be more appropriate. Transgrid suggested that the AER should have limited flexibility both in terms of determining whether a financeability issue exists and how this should be addressed.[108]
- Stakeholders had mixed views on the principles proposed to be applied by the AER in assessing a request to vary depreciation. These principles have been reflected in this rule change proposal.[109]

Other stakeholders pointed to alternatives to varying depreciation, including:

- contestable procurement,[110]
- government funding of transmission projects through RTN or government underwriting the costs of early works.[111]

104 ENGIE, submission to AEMC TPIR Stage 2 — Draft report, p.2.

105 Submissions to the AEMC TPIR Stage 2 — Draft report: AEMO p. 3; CIEG p. 2; ENGIE p. 2; EUAA p. 3; CEFC p. 2; ENA p. 2; Origin p. 1; ReAlliance p. 3; TasNetworks p. 1; Transgrid p. 4.

106 Submissions to the AEMC TPIR Stage 2 — Draft report: EUAA p. 4; NICE p. 10; PIAC p. 6.

107 Transgrid, submission to the AEMC TPIR Stage 2 — Draft report, p. 4 and p. 27.

108 Transgrid, submission to the AEMC TPIR stage 2 — Draft report, p. 4.

109 For more information, see AEMC, TPIR Stage 2 —Final report, pp. 12-13.

110 Submissions to the AEMC TPIR Stage 2 — Draft report: CIEG p. 6; PIAC p. 6; AEC p. 2.

111 Submissions to the AEMC TPIR Stage 2 — Draft report: CIEG p. 6, NICE p.2; PIAC p. 9; Snowy Hydro p. 3; TILT p. 2.

B AEMO'S 2022 ISP AND ESTIMATED COST OF ISP PROJECTS

This appendix provides an outline of the following from AEMO's 2022 ISP ODP:

- a description of the categories of ISP projects
- projects that are actionable under the NSW EII Act framework and are not actionable under the ISP framework
- ISP projects that have been completed or are close to being completed
- ISP projects that may need to financed to some extent in the future, including estimated costs.

AEMO's 2022 ISP ODP categorised and described ISP projects as outlined below.

- Committed and anticipated — these are the earliest projects in the ODP. They already have regulatory approval and are highly likely to proceed.[112]
- Actionable — urgent projects for which work should commence at the earliest possible time.[113]
- Future — projects which may include the need for the TNSP to undertake preparatory works or REZ design reports to enable more detailed consideration of the project in the next ISP.[114]

Projects that are actionable under the NSW EII Act

AEMO's 2022 ISP also included the following projects that are actionable under the NSW EII Act 2020, rather than actionable under the ISP framework.[115]

- Committed project — Central West Orana REZ transmission link[116]
- Actionable projects:
  - Sydney Ring — to reinforce Sydney, Newcastle and Wollongong supply
  - New England REZ transmission link.

ISP projects that have been completed or are close to completed

Outlined below are committed ISP projects in AEMO's 2022 ISP ODP that have been completed, or are close to completion. The costs of some of these projects have already been recovered from customers.

- **QNI Minor - Queensland – New South Wales Interconnector Minor upgrade**: In April 2020, the AER approved capital expenditure of $218m for Transgrid to deliver VNI minor. Transgrid will recover this cost over 2021-22 and 2022-23.[117]

112 AEMO, *2022 Integrated System Plan for the National Electricity Market*, June 2022 p. 66.
113 Ibid, p. 67.
114 AEMO, *2022 Integrated System Plan for the National Electricity Market*, June 2022, p. 12.
115 AEMO, *Integrated System Plan for the National Electricity Market*, June 2022, p. 13.
116 Government Gazette of the state of New South Wales, *Renewable Energy Zone (Central West Orana) Order 2021 - Number 569 - Electricity and Water*, 5 November 2021.
117 AER, *Final decision - Transgrid Contingent Project - QNI minor upgrade*, April 2020, p. 3.

- **VNI minor - Victoria to NSW interconnector upgrade**: In April 2021, the AER approved capital expenditure of $45m for Transgrid to deliver VNI minor. Transgrid has and will recover this cost over 2021-22 and 2022-23.[118]
- **Eyre Peninsula link:** This project was completed by ElectraNet and has been operational since February 2023.[119]
- **Northern QREZ Stage 1:** this project is expected to be delivered by late 2023.[120]

ISP projects that may require financing in future

Table B.1 below provides a list of ISP projects in AEMO's 2022 ISP ODP that have not yet completed, and may require finance to some extent to enable completion. There are uncertainties regarding the magnitude of ISP costs that may need to be financed in the future for a range of reasons including (but not limited to):

- the fact that some of these committed ISP projects have already been financed to some extent
- it is unknown whether decisions will be made to invest in actionable and future ISP projects in future
- it is unknown whether all the future ISP projects will become actionable ISP projects
- the estimated range of costs for ISP projects are subject to change, for example due to refinement of transmission routes and other costs.

118 AER, *Final decision - Transgrid Contingent Project - Victoria-New South Wales (VNI) Interconnector minor upgrade*, April 2021, p.4.

119 ElectraNet, *Eyre Peninsula Link website*, accessed 19 April 2023: https://www.electranet.com.au/projects/eyre-peninsula-link/

120 AEMO, *2022 Integrated System Plan for the National Electricity Market*, June 2023, p. 13.

Table B.1: **Estimated cost of ISP projects that may need finance**

TNSP	ISP PROJECT IN AEMO'S 2022 ISP ODP	ISP PROJECT STATUS	RANGE OF ESTIMATED COSTS	2023-24 OPENING RAB
Transgrid	Project EnergyConnect	Committed	$1,818m	$8,815m
	Humelink	Actionable	$953 - $3,315m	
	New England REZ extension	Future	$891 - $2,316m	
Total estimated range of Transgrid ISP costs			**$3,662 - $7,449m**	
Powerlink	QNI connect	Future	$384 - $3,125m	$7,216m
	Central to Southern Qld	Future	$55 - $1,615m	
	Darling Downs REZ expansion	Future	$43m + Battery Energy Storage System (BESS) costs.	
	Gladstone grid reinforcement	Future	$408m	
	Far north Qld REZ expansion	Future	$155 - $1,893m	
	Facilitating power to Central Queensland	Future	$37m	
Total estimated range of Powerlink ISP costs			**$1,082 - $7,121m**	
ElectraNet	Project EnergyConnect	Committed	$457m	$3,854m
	South East South Australia REZ expansion	Future	$57 - $571m	
	Mid north SA REZ expansion	Future	$340 - $582m	
Total estimated range of ElectraNet ISP costs			**$854 - $1,610m**	
AusNet	Western Renewable Link	Committed	$152 - $1,072m	$3,631m
	VNI west (via Kerang)	Actionable	$3,282 - $3,685m	
	South west	Future	$851 - $930m	

TNSP	ISP PROJECT IN AEMO'S 2022 ISP ODP	ISP PROJECT STATUS	RANGE OF ESTIMATED COSTS	2023-24 OPENING RAB
	Victoria REZ expansion			
Total estimated range of AusNet ISP costs			**$4,285 - $5,687m**	
Marinus Link	Marinus Link connecting Tasmania and Victoria	Actionable	**$2,270 - $4,080m**	No current RAB.

Note: The estimated range of ISP costs are based on: AEMO, *Final report — 2021 Transmission Cost Report for the Integrated System Plan — Final Report*, August 2021. The exceptions are the estimated range of ISP costs for VNI West, which are based on the more recent: AEMO-Transgrid, *VNI West Consultation Report – Options Assessment*, February 2023.

Transgrid and ElectraNet's costs for Project EnergyConnect are based on: AER, *Final decision - Transgrid contingent project — Project EnergyConnect*, May 2021, p. 1; AER, *Final decision - ElectraNet contingent project — Project EnergyConnect*, May 2021, p. 1.

AEMO selected AusNet to deliver the Western Renewables Link project following a competitive tender process in December 2019: AusNet, *Western Renewables Link - Project Overview*, August 2022, p. 3. This committed project is expected to be completed by July 2026 (see AEMO, *Integrated System Plan for the National Electricity Market*, June 2022, pp. 13; 94).

Marinus Link is not currently registered as a TNSP, but is registered as an Intending Participant. Marinus Link has a funding agreement in place from the Commonwealth, Victorian and Tasmanian Governments.

TasNetworks does not have any committed, anticipated, actionable or future ISP projects in AEMO's 2022 ISP ODP.

TNSP opening RABs for 2023-24 are based on: AER, *Final decision — AusNet Services Transmission Determination 2022 to 2027*, Overview, 28 January 2022, p. 24; AER, *Final decision — Powerlink Queensland Transmission Determination 2022 to 2027*, April 2022, p. 37; AER, *Final decision — Transgrid transmission determination 1 July 2023 to 30 June 2028*, Attachment 2 – Regulatory asset base, April 2023, p. 5; AER, *Final decision - ElectraNet transmission determination 1 July 2023 to 30 June 2028*, Attachment 2 — Regulatory asset base, April 2023, p. 5.

C DETAILED DESCRIPTION OF REGULATORY DEPRECIATION AND THE FINACEABILITY CHALLENGE

C.1 Purpose and objective of regulatory depreciation

Regulatory depreciation refers to the process through which part of the original cost of an asset is factored into prices – and through this process is returned to investors – over the life of the asset. Regulated revenues for any year include an allowance for capital costs. This allowance comprises a rate of return on the capital investment that is yet to be return to investors, as well a return of part of that unreturned capital investment. The return of capital component (regulatory depreciation) reduces the total amount of the capital base that earns a rate of return in the following year, which continues through time until the original cost of the asset has been fully recovered.[121]

Choosing the method of regulatory depreciation and other inputs (discussed further below) results in a choice as to how the return of an asset's costs should be spread over time. Importantly, the choice between potential regulatory depreciation methods will affect only the timing of cost recovery rather than the total value of cost recovery that is provided to investors. That is, a regulatory depreciation method that results in more regulatory depreciation earlier in the asset's life will result in higher regulated revenues in that early period; however, as this higher regulatory depreciation causes the RAB to decline more quickly, regulated revenues in future periods will be lower than otherwise, and vice versa where less regulatory depreciation is recovered early in the asset's life. That is, ultimately, an asset is depreciated once and to its exact value.

While regulatory depreciation does not affect the overall value of regulated revenue, it does have other impacts that are important to economic regulation. The principal impacts from the choice of regulatory depreciation are as follows:

- Time profile of prices – differences in the time path of regulated revenue caused by different depreciation methods impacts on the time path of prices to customers. Ensuring regulatory depreciation delivers an appropriate time path of customer prices has been the principal objective to date when deciding the regulatory depreciation method for electricity networks. Key considerations in this context have been encouraging the efficient use of electricity infrastructure and intergenerational equity.
- Avoiding stranded asset risk – the method of depreciation will affect the extent of investment that is at risk of being unrecovered due to technological and/or policy changes. While this is currently of less relevance to electricity transmission, it is a key current concern in relation to the gas pipeline sector.[122]
- Timing of cash flows – the level of revenue that a regulated business earns in each period will also determine the cash flow that the business has available to meet its

121 The concept of regulatory depreciation is identical to the principal on a home loan: payments comprise both interest and a repayment of principal, and as the principal is repaid, the base upon which interest is payable falls, until the loan is finally repaid.

122 AER *Regulating Gas Pipelines Under Uncertainty - Information Paper* November 2021.

interest commitments and repay debt. In this paper this is referred to as "financeability". How the regulatory depreciation method impacts on financeability is the central topic of this rule change request and is discussed further below.

For completeness, while economic regulators typically draw upon concepts from the financial accounting or taxation fields in relation to regulatory depreciation, the objectives driving the choices between methods differ across these fields. Therefore, the fact that different choices may be made in each instance is not unexpected. As an example, the choice of how a firm represents the depreciation of an asset in their financial accounts cannot alter the time profile of customer prices, affect stranded asset risk, or influence financeability. As a result, these central considerations to an economic regulator are not mentioned in the accounting guidelines.[123]

C.2 Selecting the form of regulatory depreciation

The determination of regulatory depreciation involves choices. These include:

- The overall method of depreciation to be applied. A number of depreciation functions have been applied in regulatory settings to date, and many more exist that could be applied, which include:
  - Straight line depreciation – where the recovery of the initial asset cost is evenly distributed over an asset's lifespan.[124]
  - Geometric depreciation (also known as declining or reducing balance) – whereby a constant rate of depreciation is applied to the written down value of an asset over an asset's lifetime.[125] If this method is selected, a decision is also required about the rate of depreciation to be applied.
  - Tilted annuity – whereby depreciation is derived such that the sum of the return on assets and regulatory depreciation (often referred to as the "capital charge") amounts grow or decline at a rate that is specified. The ability to specify the rate of growth or decline in the capital charge implies that this is a very flexible depreciation method that can be used to address a range of policy objectives.[126] If this method is selected, a decision about the tilt factor is also required.
- The asset life over which the cost recovery is to be spread. Ordinarily this is based on the expected life of the asset in question; however, applying a different life is an alterative means of changing how the asset costs are distributed over time.[127]

123 The principal guidance for the method of depreciation for financial accounting purposes is that this reflects "the pattern in which the asset's future economic benefits are expected to be consumed by the entity" (AASB 116, principle 60).

124 This could be in either nominal or real terms

125 Geometric depreciation never results in an asset becoming fully depreciated, and one solution to this is to switch to straight-line depreciation part way through the life of the asset so that the asset value does equal zero and its end of economic life.

126 Tilted annuity was first widely applied in the context of telecommunications regulation, under which prices were set (and reset) in line with the cost of replacement assets. The "tilt" factor in this context was set at the expected change in input costs. However, the method has since been used in regulatory contexts to generate a smooth time path in prices for an asset with growing demand (in which the tilt rate was set at the growth rate in demand, and implied depreciation that was back-ended relative to straight line depreciation), as well as to front-end the recovery of capital in order to pre-empt stranded asset risk.

127 Typically the technical life of the asset would be used in the first instance. Diverging from this and using the 'economic life' would likely be due changes in expected demand or supply drop off.

- How inflation is to be treated when carrying-forward the RAB (this is expanded upon below)
- Deciding when depreciation of an "asset" should commence, with the choices being from when cash has been incurred in the creation of an asset (an "as incurred" basis) or only after the asset has been created and is used in providing a service (an "as commissioned" basis).

As noted above, an important determinant of the profile of capital recovery is how inflation is treated when carrying-forward the asset over time. The two choices are:

- To carry-forward the RAB in historical cost terms – in which depreciation is defined as the return of the original historical cost of the asset, and depreciation in any period is the change in the historical cost of the asset.
- To carry-forward the RAB in inflation-adjusted (real) terms – in which depreciation is defined as the return of the real value of the asset, and depreciation in any period is defined as the change in the real value of the asset.

The choice between carrying-forward the RAB in historical cost or inflation-adjusted terms also has an implication for the rate of return that is applied when setting prices.

- Under the historical cost approach, compensation for inflation is provided through the rate of return applied in the RAB.
- Under the inflation-adjusted approach, compensation for inflation is provided for by escalating the RAB for inflation. Thus, the regulated revenue in any year includes only a real (i.e., exclusive of expected inflation) return on the RAB.[128]

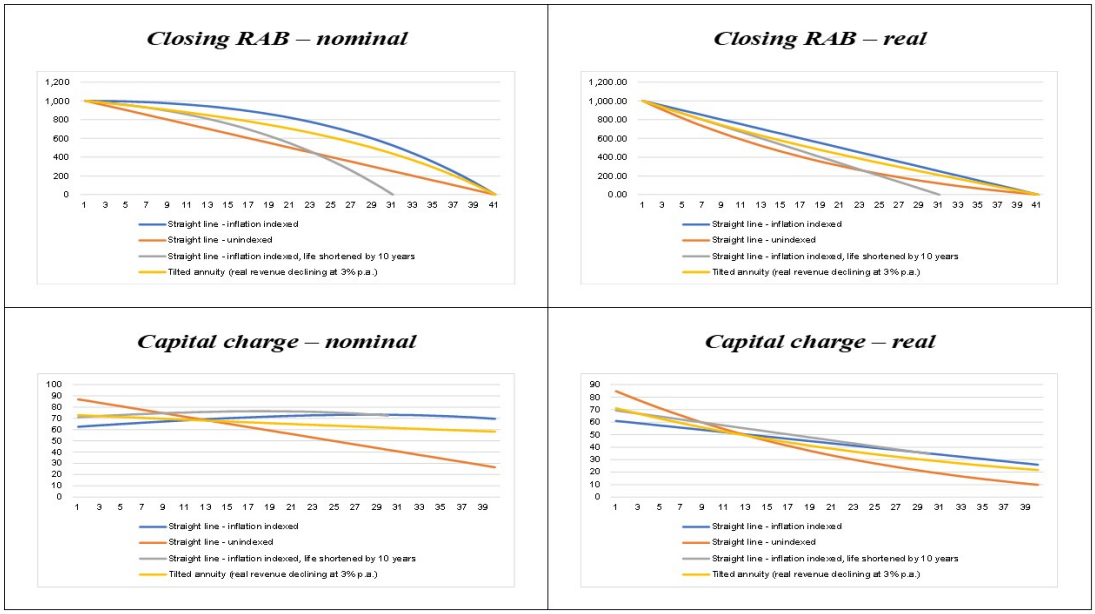
The fact that the historical cost approach compensates for inflation through (cash) revenue in the relevant year, where the inflation-adjusted approach compensates for inflation by indexing the RAB for inflation means that the latter approach implies a more back-ended revenue stream, all else constant.

The following figures demonstrate how changes to regulatory depreciation – including the choice of whether a historical cost of real approach to the RAB is applied – may affect the time path of the RAB over time, as well as the capital charge (i.e., the after-tax allowance for capital costs).[129] The figures are presented in simple nominal terms (i.e. dollars of the day) and inflation-adjusted (i.e. real) terms.

128 This outcome can be achieved by either (i) applying a real WACC directly when calculating the return on assets line item of the revenue requirement, or (ii) applying a nominal WACC when calculating the return on assets line item, but deducting the RAB inflation indexation to avoid double counting of inflation.

129 These figures assume a single asset with a cost of $1,000, a 40 year life (except where indicated otherwise), a forecast of inflation of 2.5 per cent and a vanilla WACC that is approximately consistent with current estimates.

Figure C.1: How regulatory depreciation approaches impact the RAB and after-tax allowance for capital costs over time



Source: Incenta Economic Consulting

C.3 Current approach to depreciation in the NEM

The rules regarding depreciation for electricity transmission networks are set out in clause 6A.6.3 of the NER. These rules require:

- Each asset (or asset group) to be depreciated over its economic life[130]
- Each asset is to be depreciated only once (this is the condition that results in changes to depreciation not affecting the value of the regulated revenue stream in present value terms).[131]

In addition, the rules require the RAB to be carried-forward on an inflation-indexed basis.[132]

The AER applies a straight-line depreciation method in its PTRM, together with RAB indexation, and so this method is essentially mandated.[133]

130 Clause 6A.6.3(b)(1)

131 Clause 6A.6.3(b)(2). The rules also require the depreciation method and inputs that were applied prospectively to determine revenue requirements for a regulatory period also to be applied when updating the RAB in preparation for the next review at the end of the period (clause 6A.5.4(a)(1)).

132 Clause 6A.5.4(a)(1).

133 Clause 6A.4.1(b)(1) requires a TNSP's revenue proposal to be prepared using the PTRM.

In terms of the timing of recognition of assets, while the AER provides a return on investment from the date that cash flows are expended (i.e., during the construction of an asset), depreciation has historically commenced only after assets have entered into service.[134]

C.4 Financeability and ISP Projects

TNSPs have a right to build, own and operate transmission solutions in the NEM but no obligation to deliver transmission projects under the national regulatory framework.[135] Given this, there is a risk that financeability issues may delay investment in transmission infrastructure, including actionable ISP projects.[136]

Financeability is the ability of TNSPs to efficiently raise capital to finance their activities. Creating a regime that enables regulated businesses to be financeable will facilitate those firms attracting the flow of capital funds needed to finance investment. This is beneficial to customers as well as more broadly given the importance of transmission investment for decarbonisation of energy supply.

Rating agencies consider a range of factors when assigning credit ratings for businesses. This includes qualitative factors and benchmarking against other rated firms to assess the capacity of the firm to meet its interest payments and serve debt are central considerations. These measures of the capacity of firms to pay interest and serve debt are directly influenced by the choice of depreciation method and associated inputs.

- In broad terms, the measures of the capacity for a regulated business to meet its interest payments and serve debt that ratings agencies apply will be stronger whenever the annual revenue allowance for capital costs relative to the RAB is higher. Regulatory depreciation is part of this allowance.[137]
- Where straight line depreciation is applied, the amount of depreciation as a proportion of the RAB will be directly related to the remaining life of the assets. Other factors that are important are:
  - whether the RAB will be indexed for inflation
  - during the period of construction, when the depreciation allowance is allowed to commence.

The particular issues that arise in relation to large scale actionable ISP projects are that:

- As the projects are new, the lives of the assets are those of new assets, compared to the TNSP's existing assets which are part-way through their lives. The average lives of the

134 The NER does not specifically prevent depreciation to be recovered from assets on an 'as incurred' basis, as explained in section 4.1.2.

135 The NEL and NER do not expressly provide that the primary TNSP (PTNSP) has the exclusive right to implement major transmission projects in its region. There are several examples of transmission projects in the NEM that have been undertaken by a person other than the PTNSP, such as BassLink, MurrayLink, DirectLink and the proposed CopperString 2.0 project. However, there is currently no national regulatory process to facilitate the contestable procurement of transmission projects, and the proponent of a contestable project would face considerable regulatory uncertainty.

136 The exclusive right of a TNSP to undertake an actionable ISP project is time limited under the current NER. Under clause 6A.8.2(b)(5), if a TNSP makes an application to amend a revenue determination for a contingent project the TNSP is to set out the intended date for commencing the contingent project, which must be during the regulatory control period. Under clause 6A.8.2(a1) the application has to be made as soon as practicable after the trigger event occurs.

137 An increase to the WACC would also improve financeability; however, this change would not have a neutral value.

ISP projects are likely to be approximately twice the weighted average remaining life of the TNSP's existing assets.[138]

- The cost of the ISP projects is significant such that adding them to the RAB has the potential to increase the weighted average remaining life of the assets in a TNSP's RAB materially, and so reduce materially the ratio of the TNSP's capital cost allowance to the RAB, and in turn threaten its financeability.

In addition, as depreciation does not commence until assets have been commissioned, an additional issue will exist during the construction of the assets, which for some of the ISP projects may extend over a number of years.[139]

Given that the main issue with financeability associated with ISP projects arises from the fact that the cash flows associated with those assets are delayed (in turn a consequence of their long lives), a potential solution is to adjust the timing of cash flows in the opposite direction. One way to do this is by changing the depreciation method, or the other inputs to depreciation. Several options are available in the approach to depreciation to return cash faster, these include:

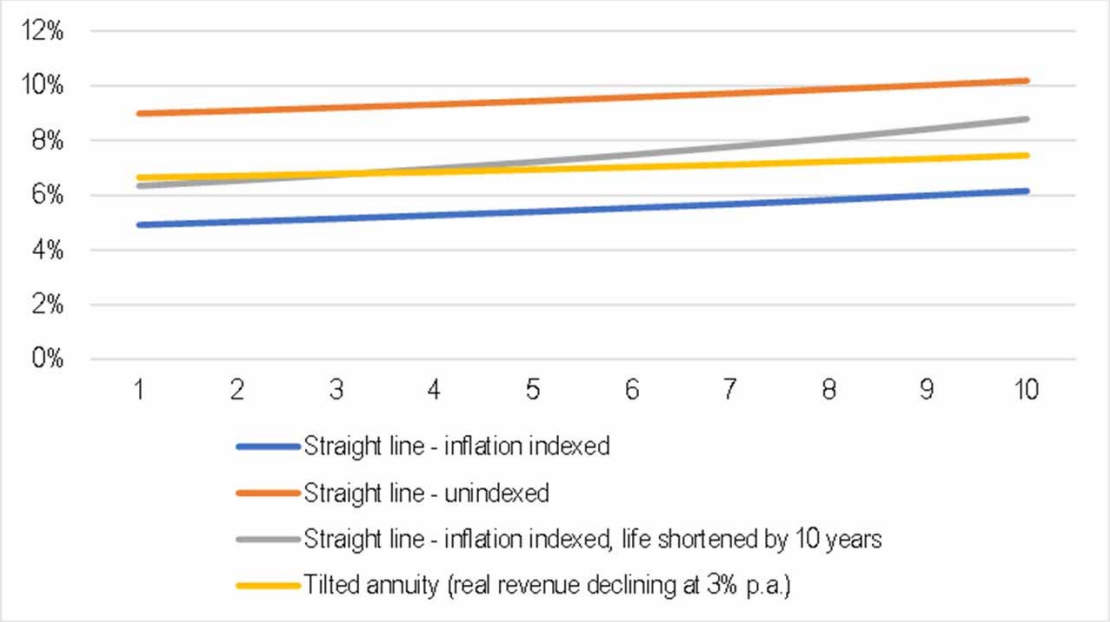
- Adjusting the profile of depreciation so that more of the cost is recovered in the early years and less in the later years
- Adjusting the economic life of the assets so that costs are returned sooner
- Switching to an un-indexed RAB approach, and/or
- Commencing the recovery of depreciation sooner, for instance, as costs are incurred rather than when assets are commissioned.

The figure below shows how one of the financial ratios preferred by the ratings agencies – the ratio of funds from operation to debt – would be expected to vary over the first 10 years under the different depreciation methods in the example that was provided above (noting that a 10 year life has been assumed for the asset).

138 Some of the ISP projects also have additional issues in that the requirement to purchase offsets for biodiversity will be a very significant part of the overall project, which would either not be depreciated (i.e., classified as land) or depreciated over a very long life (i.e., matching the life of transmission lines, which is typically 50 years).

139 The NER does not specifically prevent depreciation to be recovered from assets on an 'as incurred' basis, as explained in section 4.1.2.

Figure C.2: FFO/Debt under different depreciation methods



Source: Incenta Economic Consulting

As this figure illustrates, changing the depreciation method or the inputs to this can have a material effect on the financeability of the project. In broad terms, an FFO-to-debt ratio of greater than 7 per cent would be consistent with BBB credit rating, and a ratio of greater than 9 per cent would be consistent with a BBB+ rating, noting that the actual ratings process is a more complex task. It is important to note, however, that whether a financeability issue is deemed to exist, and the effectiveness of the response to this, will need to be assessed across the whole of the assets in the TNSP's RAB.

While there are likely to be long term benefits to customers from regulatory settings that promote financeability, the effect on the time path of customer prices also needs to be kept in mind. That is, the regulator will need to balance the needs of the regulated business with those of consumers as indicated by the NEO. This should imply that, where measures to facilitate financeability may cause a less preferable time path of prices to customers, that any response to financeability concerns be limited to what is necessary to address those concerns.