AEMC

REVIEW

Australian Energy Market Commission

FINAL REPORT

TRANSMISSION PLANNING AND INVESTMENT REVIEW

4 MAY 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.

SUMMARY

1 Transmission is a critical enabler for the transition to net zero, both in the national electricity market (NEM) and for 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 it quickly. The focus of the *Transmission planning and investment review* (TPIR or the Review) is to recommend improvements to the regulatory frameworks for transmission investment and planning to support efficient investment in and timely delivery of major transmission projects.

2 The Commission recommends changes to improve the regulatory process for projects identified in the Australian Energy Market Operator's (AEMO's) Integrated System Plan (ISP) in three key areas: the economic assessment process, the treatment of emissions reduction in transmission planning, and the application of the ex-ante regulatory framework for transmission investment to ISP expenditure.

3 This Stage 3 report is the final report of the Australian Energy Market Commission's (Commission or AEMC) *Transmission planning and investment review* and concludes this Review.

Our recommendations seek to facilitate timely and efficient investment in and delivery of ISP projects

Improving the economic assessment process by more and earlier planning activities and considering further reform opportunities

4 The Commission recommends rule changes to encourage transmission network service providers (TNSPs) to undertake more planning activities earlier in the economic assessment process. More and earlier planning activities could reduce delays to later project stages by improving the building of social licence and earlier identification of potential project barriers. The recommendations:

- provide greater certainty to TNSPs that the cost of undertaking early works can be recovered by enabling a separate contingent project application (CPA) for early works to be submitted to the AER without the need to first complete a regulatory investment test for transmission (RIT-T) and pass the feedback loop
- introduce a National Electricity Rules (NER) definition of early works to underpin the AER's assessment of an early works CPA to protect consumers against inefficient expenditure
- clarify that AEMO can specify, in the ISP, examples of preparatory activities and early works for actionable ISP projects.

5 These recommendations complement our Stage 2 final recommendations on social licence.

6 The Commission also considers that there may be further opportunities to reinforce the ISP as the central process for considering the net benefits of the group of projects that form the optimal development path (ODP) and the RIT-T to focus on improving the robustness of efficient cost estimates of an individual project identified in the ISP.

Harmonising the NER with the inclusion of emissions reduction in the national energy objectives

7 The national energy objectives will soon include emissions reduction targets as a consideration relating to the long-term interests of consumers, alongside the existing considerations of price, quality, safety, reliability and security. The Commission recommends a rule change process to harmonise the NER, including rules relating to transmission planning. This would ensure the NER remains consistent with the intent of the national energy objectives once an emissions objective is introduced.

Introducing a targeted ex-post review for ISP projects to reduce risk and uncertainty around the treatment of capex

8 The Commission recommends a rule change process to introduce a targeted ex post review mechanism for capital expenditure (capex) incurred on completed ISP projects. This would address the potential additional risk associated with ISP projects when expenditure is significant and the risk of overspending is greater.

The Commission has considered stakeholder feedback in making its recommendations

9 Extensive and constructive stakeholder engagement informed our understanding of issues, identification of areas for improving the existing regulatory process, and consideration of practical issues and constraints to different reform options. For example:

- Stakeholder feedback to the Stage 3 draft report and continued close collaboration with the market bodies and other stakeholders shaped our **economic assessment process** recommendations. The Commission's recommended changes to carry out more and earlier planning activities are strongly supported by stakeholders. Conversely, stakeholders concerns with more holistic reform to the economic assessment process influenced our recommendation to undertake further work on this in our upcoming ISP review.
- Stakeholders broadly supported more explicit incorporation of **emissions reduction** into the regulatory framework for transmission planning and sought clarity around changes which may be required to support the emissions reduction objective.
- TNSPs initially identified potential issues with applying the existing **ex post review mechanism** to ISP projects. Further consultation with the AER identified additional areas for improvement and informed the final recommendations.

We have considered our recommendations against this Review's assessment criteria

10 Considering the national electricity objective (NEO) and the issues explored in this Review, the Commission identified the following assessment criteria to be most relevant when developing its recommendations: outcomes for consumers, economic efficiency, implementation, flexibility and decarbonisation. Our recommendations, if implemented, would help promote the NEO by:

Supporting timely and efficient project delivery to promote better outcomes for consumers

11 Our recommended changes to the economic assessment process would contribute to better outcomes for consumers by supporting timely and efficient project delivery. The recommendations support TNSPs to undertake increased prepatory activities and to bring early works forward. More extensive and earlier planning for ISP projects could mitigate the risk of significant project cost increases later in the delivery process and further costs associated with project delays because of later consideration of these factors. Better upfront planning may also enable TNSPs to mitigate the risk of supply chain delays and labour supply issues.

12 The recommended introduction of a targeted ex post review for ISP projects reduces risk and uncertainty, promoting efficient delivery of major transmission projects and helping to ensure consumers pay efficient costs.

Improving economic efficiency through clear, consistent and predictable rules

13 Our recommendations contribute to clear, consistent, predictable rules, which improve economic efficiency by reducing uncertainty, risk and costs for market participants:

- The recommended reform to the economic assessment process provides TNSPs with greater certainty around cost recovery for early works.
- An emissions reduction harmonising rule change would ensure clarity for stakeholders in how market bodies and market participants will factor emissions reduction into their decision-making.
- Introducing a targeted ex post review provides clarity as to how the AER would assess potential overspend on ISP projects and reduces risk for TNSPs around the treatment of non-ISP capex where an ISP project capex overspend has occurred.

Implementation considerations shaped the recommendations

14 Our recommendations to introduce a targeted ex post review and harmonising rule changes to reflect inclusion of an emissions reduction objective under the energy objectives would reduce the administrative burden on market bodies and market participants in applying the NER. Stakeholder concerns regarding implementation challenges influenced the Commission's recommendation to undertake work on further reform of the economic assessment process in the AEMC's ISP review.

Our recommendations retain flexibility in a rapidly changing environment

15 The ability of the planning and investment framework to remain flexible in the face of market uncertainty and evolution were key considerations in the Commission's decision-making process. The economic assessment process recommendations would encourage TNSPs to progress early works earlier and in parallel with the RIT-T, making delivery of the preferred option more adaptive to changes in conditions. Our recommendation to investigate further reform of the economic assessment process under the AEMC's ISP review enables us to first assess the implementation of other recommendations in this Review before further changes are made.

The recommendations directly facilitate decarbonisation

16 The proposed reform to the economic assessment process would reduce the risk of transmission delays, supporting timely connection of the additional wind and solar generation required for the transition to net zero. An emissions reduction harmonising rule change would further help to ensure that transmission investment decisions transparently balance emissions, price, quality, safety, reliability and security, supporting the energy transition to net zero.

We recommend a 'progressive' approach to implementing our recommendations

17 The Commission considers the recommendations made across Stage 2 and 3 of this Review will significantly improve the transmission planning and investment framework. We have also identified further reform opportunities in terms of more holistic and substantive reform to the economic assessment process. However, we consider the Stage 2 and 3 recommendations should be implemented first before considering more substantive changes to the regulatory framework as part of the AEMC's upcoming ISP review.

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1 THE COMMISSION HAS MADE FINAL RECOMMENDATIONS

1.1 Our recommendations seek to support timely and efficient investment in and delivery of major transmission projects

Transmission infrastructure is a critical enabler of 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.

The current regulatory framework was developed and has evolved over a period of incremental growth of the grid where the framework sought 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's) Integrated System Plan (ISP).

The objective of the Australian Energy Market Commission's (Commission or AEMC) *Transmission planning and investment review* (TPIR or the Review) is to ensure the regulatory framework facilitates timely delivery while maintaining an adequate level of rigour, to ensure future transmission investment is in the long-term interest of consumers.

A key focus of the Review is on timeliness, as delayed investment in transmission infrastructure would come at a cost to consumers. With transmission investment occurring earlier rather than later, cheaper renewable energy sources (wind and solar) can be unlocked for consumers, reducing emissions and prices. Without transmission, consumers need to pay for more expensive capacity (gas and storage).

The Commission's preliminary modelling found that wholesale prices would be higher and reliability outcomes worse across the NEM over the period 2028-2034 if ISP projects were delayed by two years, without extension of coal generators beyond their expected retirement dates.[1] Delays to ISP projects would otherwise require additional generators to enter (above those already forecast) or the extension of coal generators to reduce the impact on wholesale prices. The extension of coal generators would increase emissions and delay the transition to net zero.

Against this background, the Commission has made recommendations in three key areas to improve the regulatory process with regard to ISP projects: the economic assessment process, the treatment of emissions reduction in transmission planning, and the application of the ex-ante regulatory framework for transmission investment to ISP expenditure. The recommendations seek to improve timeliness through earlier identification and resolution of possible barriers to investment and delivery, facilitate more efficient decision-making by increasing certainty for stakeholders, and reflect the emissions reduction imperative in transmission planning.

The Commission considers the recommendations made across Stages 2 and 3 of this Review will significantly improve the transmission planning and investment framework. We have also

1 Internal PLEXOS modelling based on the 2022 ISP model. ISP projects were delayed by two years, with all else held equal.

identified further reform opportunities in terms of more holistic and substantive reform to the economic assessment process. However, we consider the Stage 2 and 3 recommendations should be implemented before considering more substantive changes to the regulatory framework.

The following sections provide an overview of our Stage 3 final recommendations.

1.1.1 Improving the economic assessment process by bringing planning activities forward and considering further reform opportunities

The economic assessment process for ISP projects identifies and assesses credible options for transmission investment and selects the preferred option based on a cost-benefit analysis. The Commission recommends rule changes to reform the economic assessment process for ISP projects to facilitate timely delivery of these projects, along with continued investigation of further reform opportunities:

- We recommend a rule change process to better enable transmission network service providers (TNSPs) to undertake more planning activities earlier in the economic assessment process. More and earlier planning activities will improve the quality of information available to TNSPs when identifying and assessing transmission investment options and reduce the likelihood of unnecessary or higher costs being incurred later in the process such as the costs associated with delays or addressing impacts on communities and the environment.
- The Commission also considers that there may be further opportunities to reinforce the ISP as the central process for considering the net benefits of the group of projects that form the ODP and the regulatory investment test for transmission (RIT-T) to focus on improving the robustness of efficient cost estimates of a project identified in the ISP. The Commission acknowledges the concerns raised by stakeholders that there are further issues to work through. Therefore, the Commission recommends progressing this work on these further opportunities in the AEMC's upcoming ISP review.[2]

Chapter 2 sets out our recommendations for reform of the economic assessment process for ISP projects in more detail. The Commission has published indicative rule drafting for our planning activities recommendations with this final report.

1.1.2 Harmonising the NER with the inclusion of emissions reduction in the national energy objectives

The national energy objectives will soon include emissions reduction targets as one of the considerations relating to the long-term interests of consumers, alongside the existing considerations including price, quality, safety, reliability and security. The Commission recommends a rule change process to harmonise the National Electricity Rules (NER) with this change to the national energy objectives. This would ensure the NER remain consistent with the intent of the national energy objectives once an emissions component is introduced. A harmonisation process would support consistency and transparency around the treatment of emissions in transmission planning.

2 Under clause 11.126.10 of the NER, the AEMC has an obligation to undertake a review of the ISP framework.

Chapter 3 further discusses this issue and provides illustrative examples of transmission planning provisions in the NER where harmonising changes (such as references to the emissions component of the objective) may be beneficial.

1.1.3 Introducing a targeted ex post review for ISP projects to reduce risk and uncertainty around the treatment of capex

The Commission recommends a rule change process to introduce a targeted ex post review mechanism for capital expenditure (capex) incurred on completed ISP projects. The new mechanism for review of ISP capex would be separate to the existing ex post review mechanism. The existing mechanism would remain largely the same in terms of process, but would be limited to apply only to capex incurred on non-ISP projects over the five-year ex post review period.

This proposed rule change will address the potential additional risk associated with ISP projects when expenditure is significant and the risk of overspending is greater. If the Australian Energy Regulator (AER) reviews ISP capex separately from non-ISP capex, it would help the AER improve the effectiveness of its ex post reviews, which are a consumer safeguard. The recommended change would also assist TNSPs to manage risk and uncertainty associated with ISP expenditure and the current ex post review mechanism, which would promote efficient delivery of major transmission projects.

Chapter 4 further discusses this issue and outlines the proposed model. The Commission has published indicative rule drafting with this final report.

1.1.4 A separate rule change process focuses on concessional finance

The Stage 3 draft report recommended the national regulatory framework should provide greater clarity on the treatment of benefits from concessional finance. In April 2023 we received a rule change request that focuses on this issue from the Commonwealth Minister for Climate Change and Energy. We expect to commence this rule change process imminently. More information is available at the project page on our website.[3]

1.1.5 The Commission is not progressing the development of a timely delivery incentive

The Commission sought stakeholder feedback on the potential development of a timely delivery incentive (TDI) in the Stage 3 draft report. This was raised as a potential solution to mitigate against the risk of TNSPs delaying investment in, and delivery of, major transmission projects.

Other AEMC reforms recommended under this Review and existing jurisdictional levers address many of the concerns around TNSP incentives to make timely investment decisions and, once the decision is made, to deliver projects on time. The Commission considers that it is important to give these reforms time to mature before determining whether there is a case for further intervention, such as introducing a TDI. Further, stakeholder feedback was that

3 See here.

there is a lack of evidence of a problem and that designing a framework to support a TDI would be challenging.

Appendix A provides an overview of the problem the TDI was seeking to solve and the Commission's reasons for ceasing work on the TDI, having regard to stakeholder feedback.

1.2 Regular engagement with stakeholders throughout the Review shaped our recommendations

The Commission undertook regular engagement with a broad spectrum of stakeholder groups throughout the Review across a range of forums, including:

- regular working, advisory and reference group meetings with market bodies, jurisdictions and consumer representatives
- workshops, public forums and significant bilateral and multilateral engagement, which included consumer and community representatives, industry groups, TNSPs, generators and retailers and renewable energy developers/investors
- formal written feedback to the consultation paper and Stage 3 draft report.

This extensive and constructive stakeholder engagement shaped the Commission's final recommendations: stakeholder feedback informed the Commission's understanding of issues, identification of areas for improving the existing regulatory process, and consideration of practical issues and constraints to different reform options. For example:

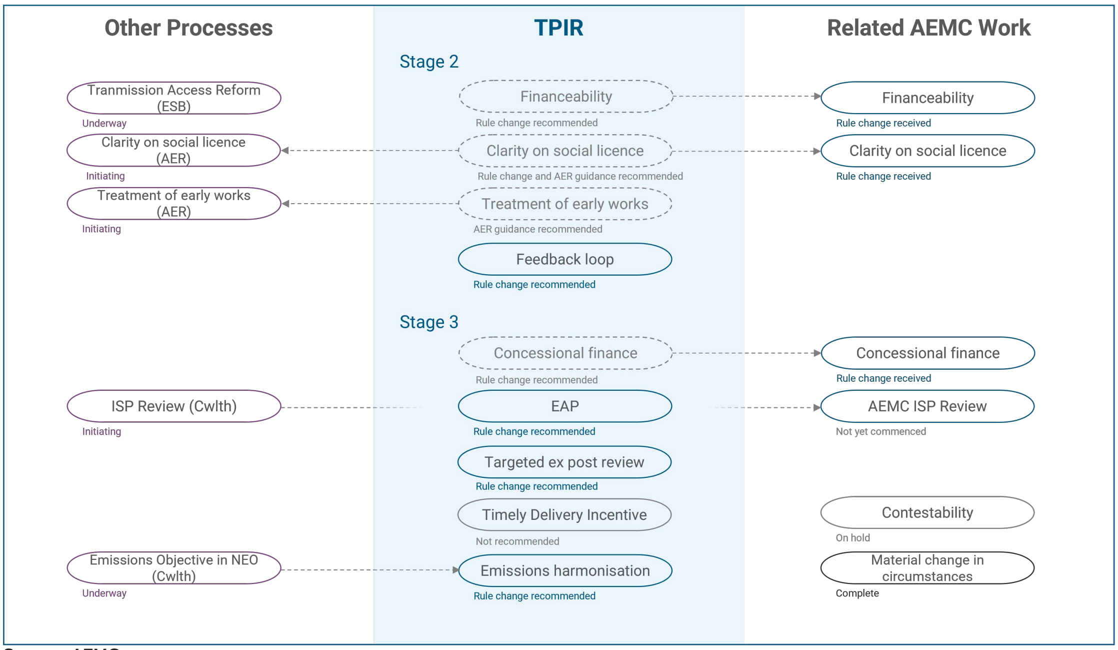
- Stakeholder feedback to the Stage 3 draft report helped the Commission narrow the options to reform the economic assessment process. Continued close collaboration with the market bodies and other stakeholders then further shaped our economic assessment process recommendations. The Commission's recommended changes to bring forward planning activities are strongly supported by stakeholders. Conversely, stakeholder feedback identified a number of implementation concerns with more holistic reform to the economic assessment process, which is reflected in our recommendation to undertake further work on this in our upcoming ISP review.
- Stakeholders broadly supported more explicit incorporation of emissions reduction into the regulatory framework for transmission planning and sought clarity around changes which may be required to support the emissions reduction objective.
- TNSPs initially identified potential issues with applying the existing ex post review mechanism to ISP projects. Further consultation with the AER identified additional areas for improvement and informed the final recommendations.

How stakeholder feedback shaped recommendations for each of our workstreams is discussed in more detail in the following chapters.

1.3 The Stage 3 final report is part of a larger body of work to support the transition to net zero

The recommendations in this Stage 3 final report are part of a larger transmission work program. Figure 1.1 places the Review's Stage 3 recommendations in the broader context of transmission reform.

Figure 1.1: The Review's recommendations are part of a broader suite of transmission reforms



Source: AEMC.

1.3.1 Our Stage 3 Final report concludes TPIR and builds off our Stage 2 final report

Our Stage 3 final report concludes the Commission's TPIR. We published the *Transmission Planning and Investment – Stage 2 Final Report* on 27 October 2022. The Stage 2 final report made four recommendations that complement our Stage 3 final recommendations:

- Introducing greater flexibility to mitigate the foreseeable risk that **financeability** concerns may arise for ISP projects. A rule change request to assess this matter further has been received by the Commonwealth Minister for Climate Change and Energy. More information is available on the project page on our website.[4]
- Providing greater clarity around **social licence** outcomes in the national framework through additional guidance from the AER and a rule change process to ensure TNSPs take a consistent approach to community engagement for ISP projects. Our recommendations under the economic assessment process workstream would further

4 See here.

support social licence outcomes through better planning activities (see chapter 2 of this report). A rule change request to assess this matter further has been received. More information is available on the project page on our website.[5]

- Clarifying the meaning of **early works** through additional guidance from the AER. Our recommendations under the economic assessment process workstream would further support increasing clarity around cost recovery of early works (see chapter 2 of this report).
- Improving **the workability of the feedback loop** to enable it to work as a timely and effective consumer safeguard. This recommendation would need to be implemented through a rule change process.

1.3.2 The Commission will not progress work on the contestability workstream at this time

The Commission considered the introduction of contestability in the provision of transmission services as part of this Review. The Commission published the *Transmission Planning and Investment Review – Contestability Directions paper* on 24 November 2022.[6] It concluded the value of a national contestability framework is likely to be limited at present due to the various jurisdictional regimes in place or being developed. The Commission is not proposing to progress this workstream further at this time.

1.3.3 The *Material change in network infrastructure project costs* rule change is complete

The *Material change in network infrastructure project costs* rule change focused on cost estimate accuracy and transparency, complementing the Review's economic assessment process workstream. The Commission published a more preferable final rule and final determination on 27 October 2022.[7]

1.3.4 The Commonwealth Government is progressing reform to include emissions reduction in the national energy objectives

As discussed above, the Commonwealth Government is proposing to include in the national energy objectives the achievement of Commonwealth, State or Territory targets for reducing greenhouse gas emissions. The proposed change would include emissions reduction in the economic efficiency framework of the national energy objectives.

This reform would trigger the need for a harmonising rule change as recommended in chapter 3 of this report.

1.3.5 AEMC and Commonwealth ISP reviews

The Commonwealth Government has indicated its intention to undertake a review of AEMO's ISP in the near term to ensure it is fit-for-purpose and explore opportunities to better integrate planning regimes across different energy sources, such as electricity and gas.[8]

5 See here.

6 AEMC, *Transmission planning and investment review - Contestability, Directions paper,* 24 November 2022.

7 AEMC, *Material change in network infrastructure project costs*, final rule determination, 27 October 2022. See here.

8 Energy Ministers Communique, 28 October 2022, p. 2.

The AEMC also has a statutory obligation to undertake a review of the ISP framework.[9] The Commission intends to consider further reform of the economic assessment process outlined in Chapter 2 in its ISP review, among other topics. The final scope of the Commission's ISP review will be informed by the Commonwealth Government's ISP review findings and recommendations.

1.3.6 Transmission Access Reform

The Energy Security Board's (ESB) work on transmission access reform is a separate area to this Review but is critically important to optimise the use of the transmission network and avoid overspend in building the network that customers pay for. Transmission access reform is designed to provide locational signals to generators, storage and scheduled load to locate in areas with available and proposed transmission capacity, as well as dispatch signals to use that network at lowest cost. The ESB considers that transmission access reform is required to get the maximum usage and value from the transmission system, where variable renewable energy and storage are the primary power supply. This will make sure that congestion on the network is efficiently managed and the network is used effectively. In February 2023, Energy Ministers requested the ESB to develop the congestion relief model and priority access ahead of bringing forward a detailed design for consideration by Ministers in mid-2023.[10]

1.4 How we have applied the national electricity objective to our recommendations

In conducting reviews, the Commission must have regard to the relevant energy objectives. For this Review, the relevant energy objective is the national electricity objective (NEO):[11]

> **BOX 1: NATIONAL ELECTRICITY OBJECTIVE**
>
> 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.

Source: *National Electricity (South Australia) Act 1996.*

The Commission has developed its recommendations in this Stage 3 final report having had regard to the NEO. More specifically, we used the assessment framework criteria summarised in Table 1.1 to assess whether the Stage 3 final recommendations promote the NEO:

9 Clause 11.126.10 of the NER.

10 Energy and Climate Change Ministerial Council, Meeting Communique, 24 February 2023, p. 2.

11 Section 7 of the National Electricity Law.

Table 1.1: Assessment framework criteria

CRITERIA	EXPLANATION
Outcomes for consumers	• Assesses whether the regulatory arrangements promote and appropriately balance the timely and efficient delivery of transmission projects.

Economic efficiency	• Assesses whether the solution promotes efficient investment in, and use of, electricity services in the long term interests of consumers with regard to:
	  ◦ **Efficient risk allocation:** allocating risk (and costs) to parties best placed to manage them and who have the incentives to do so will support efficient decision-making.
	  ◦ **Effective price signals/incentives:** effective incentives are needed to support service providers in making efficient and timely investment decisions.
	  ◦ **Information provision/transparency:** service providers require clear adequate information to inform decision-making in an evolving market.
	  ◦ **Clear, consistent, predictable rules:** a stable regulatory environment creates confidence in the market and will encourage investment and innovation through the transition and beyond.
	• Evaluates whether the solution provides service providers with a reasonable opportunity to recover at least their efficient costs.

Implementation	• Considers the complexity of implementing a solution, ie whether it will require law and rule changes or other jurisdictional legislative changes. • Assesses the costs of implementing a solution (practical implementation and compliance costs) • Evaluates the timing of costs and benefits.
Flexibility	• Assesses whether the solution is consistent with the long-term direction of energy market reform. • Evaluates whether the solution is flexible enough to accommodate uncertainty regarding unknown technological, policy and other changes that may eventuate.
Decarbonisation	• Considers whether market arrangements will enable the decarbonisation of the energy market.

Source: AEMC.

1.4.1 Improved outcomes for consumers are central to the Review

Our recommended changes to the economic assessment process would contribute to better outcomes for consumers by supporting timely and efficient project delivery. The recommendations support TNSPs to undertake increased preparatory activities and to bring early works forward. More extensive and earlier planning for ISP projects could mitigate the risk of significant project cost increases later in the delivery process and further costs associated with project delays because of later consideration of these factors. Bringing these activities forward may also enable TNSPs to mitigate the risk of supply chain delays and labour supply issues.

The recommended introduction of a targeted ex post review for ISP projects reduces risk and uncertainty, promoting efficient delivery of major transmission projects and helping to ensure consumers pay efficient costs.

1.4.2 Our recommendations improve economic efficiency

Clear, consistent and predictable rules improve economic efficiency by reducing uncertainty, risk and costs for market participants. The Stage 3 recommendations contribute to clear, consistent, predictable rules:

- The recommended reform to the economic assessment process provides TNSPs with greater certainty around cost recovery for early works. Greater cost recovery certainty upfront supports more efficient investment decisions and ultimately may reduce overall project costs by de-risking later project stages.
- An emissions reduction harmonising rule change would ensure clarity for stakeholders in how market bodies and market participants will factor emissions reduction into their decision-making. A consistent approach to considering emissions reduction in the transmission planning and investment framework reduces administrative burden for market bodies and market participants.
- Introducing a targeted ex post review provides clarity as to how the AER would assess potential overspend on ISP projects and reduces risk for TNSPs around the treatment of non-ISP capex where a TNSP has overspent on an ISP project. Lower risk and uncertainty for TNSPs promotes efficient delivery of major transmission projects.

1.4.3 Implementation considerations shaped the recommendations

Our recommendations, especially to introduce a targeted ex post review and harmonising rule changes to reflect inclusion of an emissions reduction objective, would reduce the administrative burden on market bodies and market participants in applying the NER. Stakeholder concerns regarding implementation challenges influenced the Commission's recommendation to consider further reform of the economic assessment process under the ISP review where further investigation and consultation can occur.

1.4.4 Recommendations retain flexibility in a rapidly changing environment

The Stage 3 recommendations align with the long-term direction of the energy market. The ability of the planning and investment framework to remain flexible in the face of market uncertainty and evolution were key considerations in the Commission's decision-making process. The recommendations retain or improve flexibility in the following ways:

- The economic assessment process recommendations would encourage TNSPs to progress early works earlier and in parallel with the RIT-T. This would lead to earlier identification of issues, enabling delivery of the preferred option to be more adaptive to on-the-ground conditions. The Commission's recommendation to consider further reform to the economic assessment process under the AEMC's ISP review enables us to develop further reform based on considering the implementation of other recommendations in this Review.
- The proposed targeted ex post review provides greater flexibility in the framework to assess ISP projects that may span more than one review cycle.

1.4.5 The recommendations directly facilitate decarbonisation

Timely delivery of transmission is an essential enabler of economy-wide emissions reduction. The proposed reform to the economic assessment process would reduce the risk of transmission delays, supporting timely connection of the additional wind and solar generation required for the transition to net zero.

An emissions reduction harmonising rule change would help to ensure that transmission investment decisions transparently balance emissions, price, quality, safety, reliability and security, supporting the energy transition to net zero.

2 IMPROVING THE ECONOMIC ASSESSMENT PROCESS TO FACILITATE TIMELY AND EFFICIENT DELIVERY OF TRANSMISSION PROJECTS

BOX 2: KEY RECOMMENDATIONS

The Commission's recommendations aim to encourage TNSPs to efficiently undertake more planning activities earlier. This will improve the quality of information available to TNSPs when identifying and assessing transmission investment options and reduce the likelihood of unnecessary or higher costs being incurred later in the process such as the costs associated with delays or addressing impacts on communities and the environment.

We recommend rule changes to:

- Enable TNSPs to submit an early works contingent project application (CPA) without needing to first complete a RIT-T and pass the feedback loop. This provides TNSPs with earlier cost recovery certainty and an incentive to undertake early works concurrently with the RIT-T.
- Introduce a NER definition of early works to underpin the AER's assessment of an early works CPA to protect consumers against inefficient expenditure.
- Clarify that AEMO can specify, in the ISP, examples of preparatory activities and early works for actionable ISP projects.

The Commission considers that based on the reforms already underway in relation to Stage 2 and Stage 3 of TPIR (enable earlier cost recovery for early works and encourage TNSPs to undertake a broader range of social licence activities and preparatory activities), the quality of the information available to TNSPs and AEMO in planning processes, including the ISP, will be of higher quality. This will likely lead to only rare circumstances where a further credible option is identified at the RIT-T stage, and where it is, that the gross market benefits are unlikely to be materially different to the options already included in the ISP's optimal development path.

On this basis the Commission considers that there may be further opportunity to reinforce the ISP as the central process for considering the net benefits of the group of projects that form the ODP and the RIT-T to focus on improving the robustness of efficient cost estimates of an individual project identified in the ISP. However, the Commission acknowledges the concerns raised by stakeholders that there are further issues to work through. Therefore, the Commission recommends progressing work on these further opportunities in the AEMC's upcoming ISP review, which will enable us to consider further and new information.

2.1 The Commission recommends improvements to the economic assessment process for ISP projects

2.1.1 Our recommendations support the objectives of the Review

The Commission recommends rule changes to encourage TNSPs to efficiently undertake more planning activities earlier in the economic assessment process.[12] The Commission also recommends consideration of further reform opportunities through the AEMC's subsequent ISP review to develop what we consider could be a more efficient and timely economic assessment process.

The Commission's recommendations promote better outcomes for consumers

The Commission's recommendations support cost recovery certainty for efficient and earlier planning activities. Undertaking more planning activities, earlier in the process would enable TNSPs to develop options for transmission investment that more accurately reflect social, cultural, heritage and environmental impacts. This would mitigate the risk of later project cost increases and project delays because of later consideration of these factors.[13] Bringing these activities forward could also mitigate the risk of additional costs to consumers due to supply chain delays and labour supply issues.[14]

We consider that, on balance, incurring greater costs of planning earlier in the process will significantly benefit consumers by avoiding greater costs to consumers in the future. Section 2.2.1 describes our recommendations to increase cost recovery certainty on planning activities for TNSPs, ultimately leading to lower cost and therefore better outcomes for consumers.

The Commission's recommendations support economic efficiency

Our recommendations support economic efficiency through better information and transparency on what planning activities are beneficial and efficient to undertake. This will help to inform TNSPs' and the AER's decisions on the efficient level of planning activities by:

- clarifying that AEMO can specify in the ISP examples of preparatory activities and early works for actionable ISP projects, and
- introducing a NER definition of early works to underpin the AER's assessment of an early works CPA to protect consumers against inefficient expenditure.

Section 2.2.2 and section 2.2.3 describes these proposed reforms in more detail.

The Commission's recommendations promote flexibility

The Commission considers that there may be further opportunity to reinforce the ISP as the central process for considering the net benefits of the group of projects that form the ODP

12 AEMO Victorian Planning (AVP) is responsible for the planning of the Victorian transmission network. In this chapter, for ease of reading, the term 'TNSP' encompasses AVP's Victorian planning role.

13 A project could increase in cost because initial cost estimates did not reflect the costs of aligning the project with environmental planning requirements. For example, the costs of biodiversity offsets or amending a line route to facilitate better environmental outcomes.

14 For example a TNSP could purchase equipment which will be needed regardless of the preferred option ultimately selected to avoid costs associated with equipment supply chain delays.

and the RIT-T to focus on improving the robustness of efficient cost estimates of an individual project identified in the ISP.

These opportunities for further reform would build on the foundation of reforms we have proposed under TPIR Stage 2 and 3 in relation to social licence and bringing cost recovery for planning activities for ISP projects forward. Exploring more holistic reform opportunities in the AEMC's upcoming ISP review will retain flexibility to consider the impact of the new arrangements once they are in place and allow us to have regard to other changes that may happen in the near-term, for example any changes to the economic assessment process that will come out of the Commonwealth's ISP review.[15] section 2.3 describes our recommendation in more detail.

The Commission's recommendations support emissions reduction

Our recommendations support emissions reduction through more timely delivery of the transmission infrastructure required to facilitate increased grid connection of renewable energy. Our recommendations to incentivise more and earlier planning activities seek to improve the timeliness of transmission delivery. Our recommendation to further consider opportunities to streamline the economic assessment process could lead to additional improvements.

2.1.2 Stakeholder feedback and the need for timely delivery of ISP projects has shaped our recommendations

Stakeholder submissions to the Stage 3 draft report indicated strong support for exploring how the economic assessment process can better support the timely and efficient delivery of actionable ISP projects. Particularly, stakeholders expressed strong support for changes that incentivise TNSPs to efficiently undertake more planning earlier in the process.[16]

The Stage 3 draft report set out three high-level strawperson options, as a starting point for exploring ways to improve the timeliness of the economic assessment of ISP projects, whilst maintaining an appropriate level of rigour.[17] We developed the strawperson options in close consultation with the market bodies and sought input from jurisdictional governments, consumer groups, TNSPs and other stakeholders. Based on stakeholder feedback, we developed our final recommendations to:

- bring forward planning activities in line with strawperson options 1 (more and earlier planning activities). and
- consider further improvements to the economic assessment process as part of the ISP review in line with strawperson 2 (centralising benefits assessment in the ISP).[18]

Box 3 summarises the strawperson options we consulted on in the Stage 3 draft report.

15 Chapter 1 provides further details on the AEMC's ISP review.

16 Submissions to the draft report: AusNet, p. 2; Clean Energy Investor Group (CEIG), p. 2; Marinus Link Pty Ltd (MLPL), p. 3; TasNetworks, p. 2; Transgrid p. 2; RE-Alliance (REA) p. 2; Clean Energy Council (CEC), p. 2.

17 Appendix B shows the existing economic assessment process for major transmission projects.

18 Stakeholders broadly did not support further consideration of strawperson option 3, reflecting a range of concerns in relation to its practicality. The Commission considered concerns raised by stakeholders, and decided not to pursue strawperson option 3 further through this Review.

BOX 3: DRAFT REPORT STRAWPERSON OPTIONS

The Stage 3 draft report described three high-level strawperson options, reflecting a spectrum of alternatives to the current arrangements:

- *Strawperson option 1* – retained the core features of the existing process. However, TNSPs would be able to submit an early works CPA prior to completing a RIT-T, to seek a regulatory allowance for undertaking early works concurrently with the RIT-T.
- *Strawperson option 2* – centralised the net benefits assessment of credible options in the ISP process. TNSPs would focus on exploring the credibility and refining the costs of these options in greater detail, in consultation with stakeholders. TNSPs would select the lowest-cost credible option as the preferred option.
- *Strawperson option 3* – introduced a more frequent ISP process to identify credible options and select the preferred option, whilst completely removing the RIT-T. Strengthened joint planning arrangements would facilitate high-quality input from TNSPs into the ISP analysis.

Source: AEMC, *Transmission planning and investment review - Stage 3, Draft Report*, 21 September 2022, pp. 40-44.

Our recommendations reflect stakeholder support to bring planning activities forward

Stakeholders expressed strong support throughout the consultative process for reform that brings forward planning activities to better inform investment decisions and reduce the risk of later cost increases (strawperson option 1).[19] Stakeholders considered that planning activities help to build and maintain social licence for major transmission projects, which mitigates delivery risk, improves transparency for stakeholders, and improves confidence that the preferred option is deliverable.[20] For example, AusNet considered that early works activities commencing earlier, such as corridor assessment and stakeholder engagement planning, will help improve confidence in transmission planning activities and reduce the risk of project delays.[21] Stakeholders also considered that strawperson option 1 would encourage TNSPs to undertake more planning activities earlier by providing TNSPs with the certainty that they can recover the costs for efficient planning activities.[22]

The Commission agrees with stakeholders that bringing forward planning activities could have significant benefits in terms of reducing the risk of later increases in project costs and facilitating timely delivery of ISP projects. Some stakeholders have suggested refinements to strawperson option 1, which we have incorporated into our final recommendations.[23]

19 Submissions to the Stage 3 draft report: AusNet, p. 2; MLPL, p.3; AEMO, p. 4-5; REA, p. 7; CEC, p.2; TasNetworks, p. 2.

20 Submissions to the Stage 3 draft report: AusNet, pp. 11-12; ENA, p. 5; AER, pp. 3-4; AGL, p.3; Origin, p. 2; TasNetworks, p. 2; MLPL, p. 3.

21 AusNet, submission to the Draft report, p. 11-12.

22 Submissions to the Stage 3 draft report: Transgrid, p. 2; AEMO, p. 5-6.

23 Submissions to the Stage 3 draft report: AusNet, p. 11-12; ENA, p. 5; AER, p. 3-4; AGL, p.3; Origin, p. 2; TasNetworks, p. 2; MLPL, p. 3.

Stakeholders influenced our identification of additional reform opportunities and highlighted further work is required

Many stakeholders supported exploring more holistic changes to the economic assessment processes based on a centralised net benefits assessment in the ISP and TNSPs refining the costs of credible options, i.e strawperson option 2.[24] Several submissions highlighted that a single centralised process for assessing the benefits of ISP projects could improve transparency for stakeholders,[25] or suggested that AEMO may be best placed to assess system-wide benefits.[26] Stakeholders suggested that strengthened joint planning arrangements could ensure TNSPs' local knowledge informs a more centralised benefits assessment.[27]

However, stakeholder submissions also noted the need for more detailed analysis of strawperson option 2. For example, some submissions highlighted potential risks in relation to the rigour of the economic assessment.[28] Others noted concerns in relation to selecting the preferred option on the basis of the lowest cost[29] and the ISP's ability to consider local network impacts.[30] In particular TNSPs were not in favour of considering strawperson option 2 any further due to the above-mentioned issues.[31]

The Commission has consulted in detail with stakeholders to further develop reform which builds on the design of strawperson option 2 and assessed the associated risks and opportunities. This has led us to identify additional reform opportunities to expand the ISP analysis, enhance joint planning arrangements, and removing the net benefits assessment from the RIT-T.[32] Section 2.3 describes these additional reform opportunities in more detail.

2.1.3 Our Stage 2 and 3 recommendations collectively improve timely and efficient delivery

The Commission made several reform recommendations in the Stage 2 final report to clarify and improve the economic assessment process. We made recommendations to improve social licence building, clarify the regulatory treatment of planning activities and improve the workability of the feedback loop.[33] Figure 2.1 illustrates how our Stage 3 recommendations (discussed in chapter 2) complement our TPIR Stage 2 recommendations and collectively facilitate timely and efficient delivery of ISP projects.

24 Submissions to the Stage 3 draft report: AGL, p. 3; Public Interest Advocacy Centre (PIAC), p. 3; REA, p. 8; AEMO, p. 8; AEC, p. 2; Origin, p. 1; CEIG, p. 2; Tilt Renewables, p. 2.

25 Submissions to the Stage 3 draft report: REA, p. 8; AEMO, p. 6-7; PIAC, p. 3.

26 AGL, submission to the Stage 3 draft report, p. 3.

27 PIAC, submission to the Stage 3 draft report, p. 3.

28 Submissions to the Stage 3 draft report: AER, p. 3; AEMO, p. 7-8; AusNet, p. 7; MLPL, p. 3.

29 Submissions to the Stage 3 draft report: AEC, p. 2; Origin, p. 2.

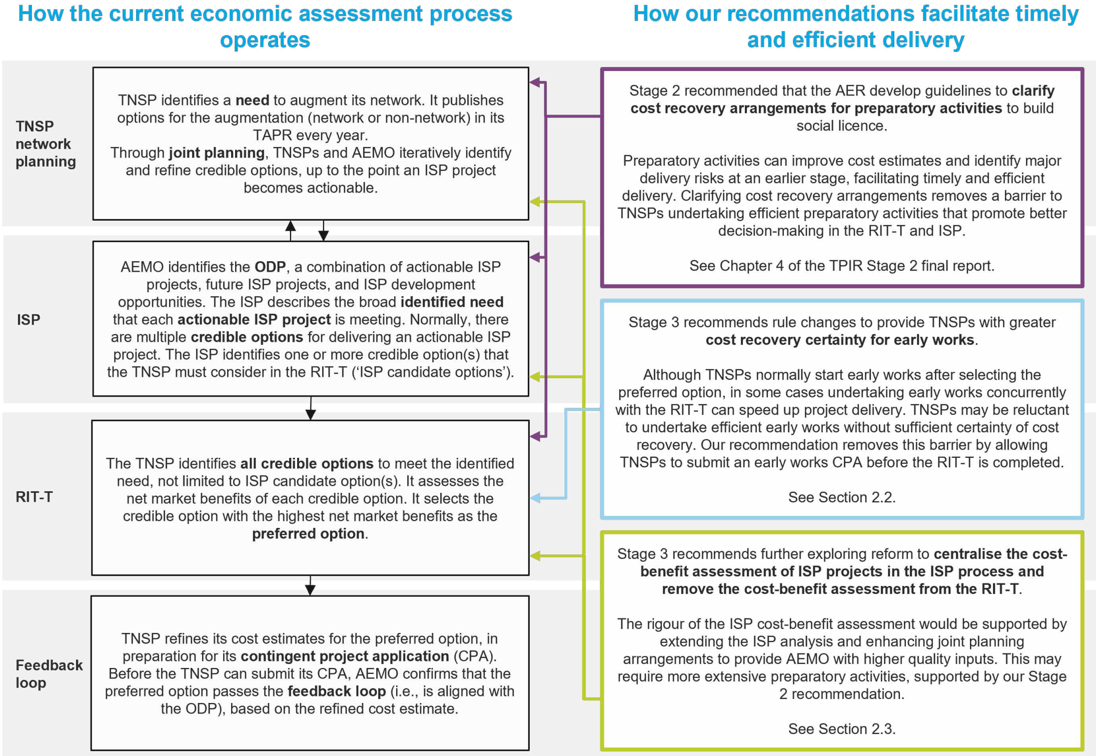
30 Submissions to the Stage 3 draft report: Transgrid, p. 2; CEC, p. 2; Energy Networks Australia (ENA), p. 7; AusNet, p. 10; TasNetworks, p. 2.

31 Submissions to the Stage 3 draft report: AusNet, p. 1; ENA, p. 2; TasNetworks, p. 2; Transgrid, p. 2; Fortescue Future Industries (FFI), p.5; Energy Australia, p. 2.

32 AEMO considers that removing the benefits assessment from the RIT-T should be seen as just one possible option and be considered alongside other potential options in the upcoming AEMC ISP review.

33 See: AEMC, *Transmission planning and investment review - Stage 2, Final report*, 27 October 2022, Chapters 3-5.

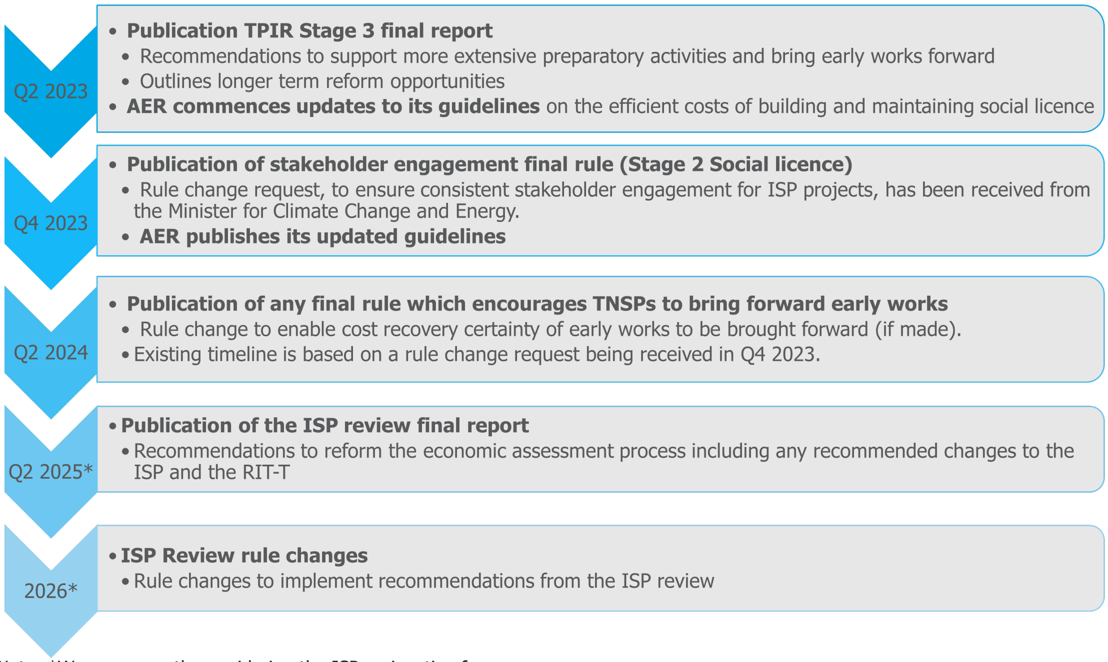
Figure 2.1: Our Stage 2 and 3 recommendations facilitate timely and efficient delivery of ISP projects



Note: TAPR refers to the Transmission Annual Planning Reports, prepared by TNSPs as part of their network planning process.. Appendix B provides a more detailed overview of the current economic assessment process in the form of a process map.

The Commission has recommended a progressive approach to developing reform of the economic assessment process. This approach recognises that our recommendations complement and build on each other. The Commission will explore further reform once our Stage 2 and 3 recommendations have been implemented. Figure 2.2 outlines an indicative timeline for our reform of the economic assessment process.

Figure 2.2: Staged implementation of reform



Note: *We are currently considering the ISP review timeframes..

We would hope to complete any rule changes to implement our Stage 2 and 3 recommendations by the end of 2024.[34] This means that these rule changes can apply to the next tranche of actionable ISP projects, ie actionable projects in the 2024 ISP, which TNSP should deliver between 2025-2028.[35] Based on this timeline, any further reform opportunities discussed in section 2.3 could apply to actionable ISP projects in the 2028 ISP.

2.2 Our recommendations support better upfront planning to minimise the risk of future cost increases

The Commission recommends amending the regulatory framework to encourage TNSPs to efficiently undertake more planning activities earlier in the economic assessment process to mitigate the risk of later project cost increases and project delays because of later consideration of these factors.[36] The Commission's recommended rule changes would:

- enable TNSPs to submit an early works CPA without needing to complete a RIT-T and pass the feedback loop. This provides TNSPs with earlier cost recovery certainty and an

34 A rule change proponent would need to submit a rule change request to the AEMC for us to make a rule, which if made, would implement our recommended rule changes from this review.

35 AEMO, *2022 Integrated System Plan*, June 2022, p. 76-77.

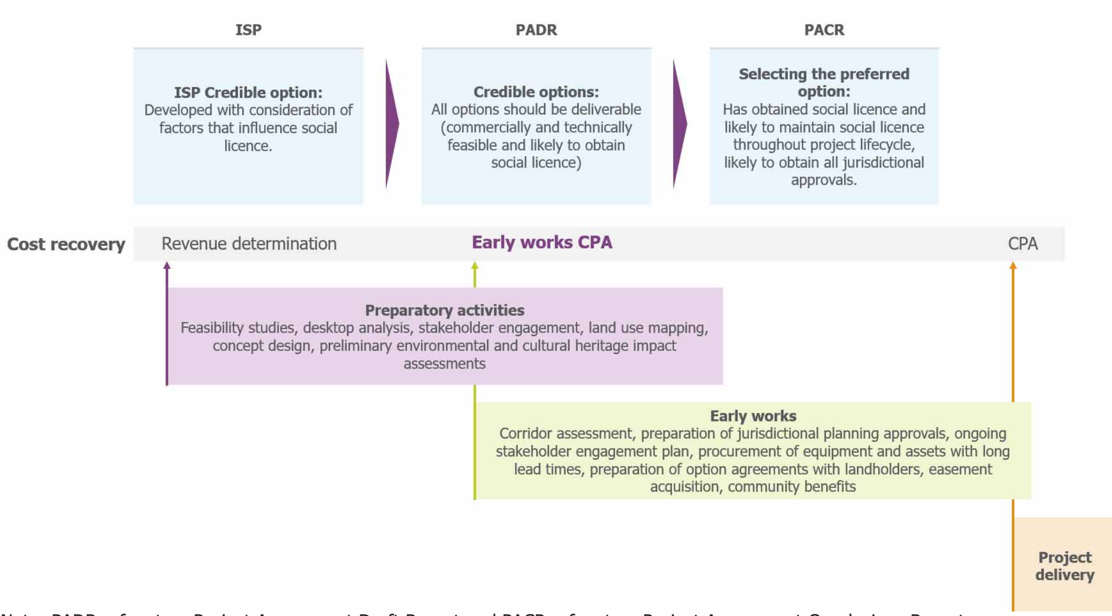
36 More extensive planning activities means undertaking an increased level of preparatory activities to comprehensively investigate the costs and benefits of all credible options in the ISP and RIT-T. It also means undertaking some early works concurrently with the RIT-T to improve the timely delivery of the preferred option that is ultimately chosen.

incentive to undertake early works concurrently with the RIT-T process (see section 2.2.1).

- introduce a NER definition of early works to underpin the AER's assessment of an early works CPA to protect consumers against inefficient expenditure (see section 2.2.2).
- clarify that AEMO can specify, in the ISP, examples of preparatory activities and early works for actionable ISP projects (see section 2.2.3).

Figure 2.3 illustrates how our recommendations on planning activities would operate.

Figure 2.3: An example of more and earlier planning activities



Note: PADR refers to a Project Assessment Draft Report and PACR refers to a Project Assessment Conclusions Report.

2.2.1 A TNSP could submit an early works CPA prior to completing the RIT-T

The Commission's final recommendation is to enable TNSPs to submit an early works CPA, for an actionable ISP project, without having to complete a RIT-T and feedback loop.[37] This encourages TNSPs to commence early works sooner by providing TNSPs with cost recovery certainty, prior to completing the RIT-T.[38]

37 Clauses 5.16A.5(e) and 5.16A.6 (b) of the proposed rule. We recommend defining an "early works CPA" as an application by a TNSP to amend its revenue determination in respect of the costs of early works. This distinguishes an "early works CPA" from a "CPA" which is made with respect to other project costs, not solely early works costs. This distinction is necessary to clarify what costs a TNSP may seek regulatory approval for, without having to comply with the requirement to complete a RIT-T and pass AEMO's feedback loop assessment. See proposed definitions for Chapter 10 of the proposed rule.

38 Cost recovery certainty means that a TNSP can recover early works expenditure, which has been approved in an early works CPA, from consumers through prescribed network charges. This is the case even where the project is ultimately not delivered. See: AER, *Guidance note – Regulation of actionable ISP projects*, March 2021, p. 30.

Under existing arrangements, a TNSP can only receive this cost recovery certainty after completing a RIT-T (which could be an early works RIT-T) and feedback loop as these are preconditions to submit a CPA.[39] This may mean that TNSPs do not carry out early works when it would be most beneficial for the timely and efficient delivery of the ISP project.

Our recommendation gives TNSPs the discretion not to bring early works/cost recovery forward.[40] For example, in cases where a TNSP may determine that it is not beneficial or necessary to bring early works/cost recovery forward.

Our reform could facilitate significant time savings to the overall project delivery timeframes because carrying out early works may reduce supply chain delays and mitigate other project delay risks. The time savings may be greater for ISP staged projects. For these projects, we estimate that our reform may represent a time saving of up to four months to complete the economic assessment process relative to the current arrangements. This is because, under our recommendation, a TNSP would not need to complete a RIT-T and feedback loop in stage 1 – early works before commencing with activities to deliver stage 1.

Our recommendations further clarify that when preparing a RIT-T, feedback loop and CPA, a TNSP must reflect the costs approved in any prior early works CPAs for the specific actionable ISP project to accurately reflect the total cost of the project.[41] For ISP staged projects, costs approved in an early works CPA submitted in stage 1 – early works, where stage 1 is a separate actionable ISP project, does not need to be included in any subsequent RIT-T, feedback loop or CPA.[42] This is because each stage of an actionable ISP staged project forms a distinct actionable ISP project.

2.2.2 We recommend guidance on the assessment of early works costs

We recommend including a definition of early works in the NER to provide guidance on the assessment of an early works CPA.[43] The definition introduces principles for the AER to consider when assessing early works costs. The AER should be satisfied that the costs proposed are for activities that:[44]

- improve the accuracy of cost estimates for that project, or
- facilitate delivery in line with the timeframes specified by the most recent ISP.

The Commission acknowledges the potential risks raised by stakeholders in bringing some early works forward. For example, the AER considers that bringing forward early works could

39 Clause 5.16A.5 (a) & (b).

40 Clause 5.16A.4 (b1) of the proposed rule.

41 Clauses 5.16A.6 (d) & 6A.8.2 (b)(9) of the proposed rule. For the existing treatment of early works costs in the feedback loop see: AER, *Guidance note – Regulation of actionable ISP projects*, March 2021, pp. 29-31. In a future rule change process, we will further consider the appropriate treatment of early works costs in the RIT-T, feedback loop and final CPA.

42 They are in effect sunk. However, where AEMO and the AER consider that it is appropriate to include some of these costs in their respective assessments, TNSPs should include the relevant information requested by AEMO and the AER.

43 This builds on our recommendation in the TPIR Stage 2 final report, which recommended to improve clarity through proposing a description of early works that the AER should reflect in its guidance on ISP projects. AEMC, *Transmission planning and investment review - Stage 2, Final report*, 27 October 2022, p. 40-41.

44 See definition of early works in NER chapter 10 of the proposed rule.

potentially restrict the range of options considered in the RIT-T or weaken the imperative for cost efficiency of these early works activities.[45]

We consider that it may be beneficial to have further guidance on the AER's assessment of an early works CPA, which a TNSP submits prior to completing a RIT-T. This guidance should aim to address risks specifically associated with bringing early works forward and provide clarity on the types of early works that should be brought forward. We consider that a subsequent rule change process should further consider the need for such guidance.

2.2.3 AEMO may specify preparatory activities and early works in the ISP

The Commission recommends clarifying in the NER that AEMO may include in the ISP examples of preparatory activities and early works for an actionable ISP project.[46] Guidance, by way of examples, would support:

- TNSPs in including efficient costs in their revenue proposal or early works CPA, and
- the AER when assessing the efficiency of early works costs.[47]

These examples would not represent an exhaustive list nor obligate TNSPs to complete specific activities.

The Commission recommends further clarifying that a TNSP must carry out preparatory activities for actionable ISP projects, that the TNSP considers beneficial, where these activities have not already commenced.[48] This clarifies that TNSPs must carry out preparatory activities for actionable ISP projects regardless of whether these activities are specified in the ISP or not.

Currently, the ISP may specify whether preparatory activities must be carried out for future ISP projects.[49] These are activities that investigate the costs and benefits of projects that would likely be needed in the future but have not been deemed actionable by the ISP. Our final recommendation extends the existing arrangements for future ISP projects to preparatory activities for actionable ISP projects, ie activities that TNSPs undertake to refine the costs and benefits once a project becomes actionable.[50]

The ISP also currently includes examples of early works that a TNSP may undertake for an ISP staged project. Our recommendation clarifies that the ISP may specify early works for *all* actionable ISP projects.[51]

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45 AER, submission to the Stage 3 final report, p. 3.

46 Clause 5.22.6 (a)(6)(vii) of the proposed rule.

47 In discussions with the AER and TNSPs, they considered that including examples of preparatory activities and early works would be helpful.

48 Clause 5.22.6(d) of the proposed rule.

49 Clause 5.22.6 (c) of the NER.

50 Clause 5.22.6 (a)(6)(vii) of the proposed rule.

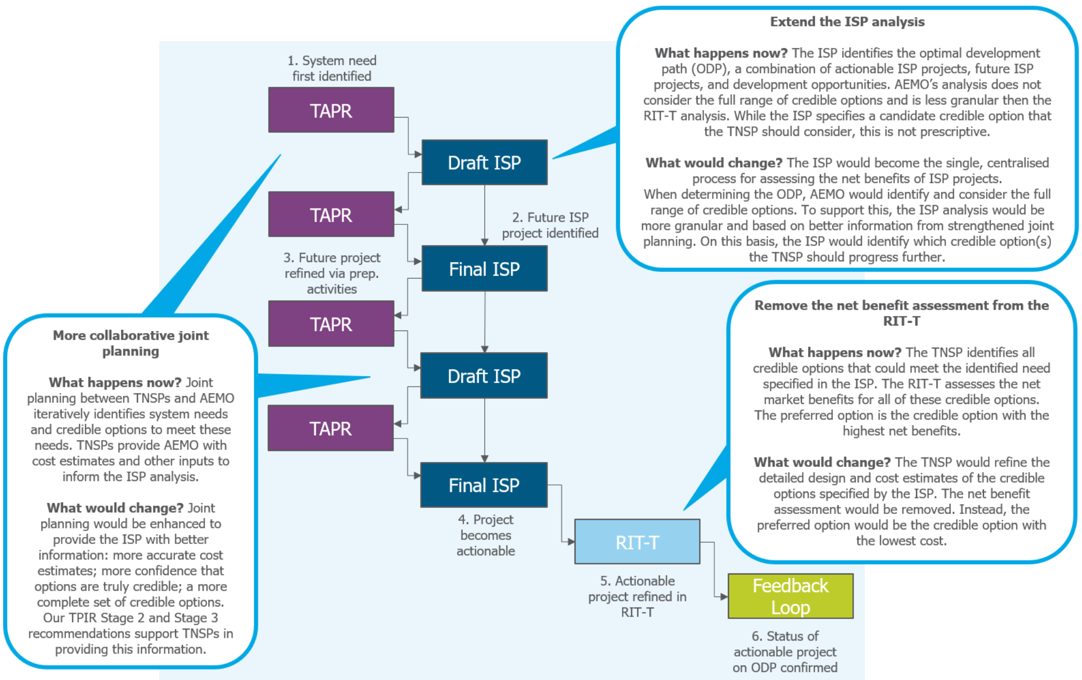
51 Ibid.

2.3 The Commission has identified opportunities to further improve the economic assessment process for ISP projects

The Commission's vision for future improvements to the economic assessment process for ISP projects is to reinforce the ISP as the central process for considering the net benefits of the group of projects that form the ODP. TNSPs would actively contribute to this process through strengthened joint planning arrangements. On this basis, the RIT-T would focus on improving the robustness of cost estimates and select the preferred option based on lowest cost.

Our proposed reforms under TPIR Stage 2 and Stage 3 (enable earlier cost recovery for early works and encourage TNSPs to undertake a broader range of social licence activities and preparatory activities) will improve the quality of the information available to TNSPs and AEMO in planning processes, including in the ISP. These reforms lay the foundation for a more centralised economic assessment process, which in our view would lead to more efficient decision-making in transmission planning and could further improve timely project delivery. Figure 2.4 illustrates how our envisaged reform would change the existing economic assessment process for ISP projects.[52]

Figure 2.4: How our identified further reform opportunities would change the economic assessment process for ISP projects



Note: TAPR refers to the Transmission Annual Planning Reports, prepared by TNSPs as part of their network planning process. TNSPs produce other network planning documents, such as for their revenue proposals.

52 A more detailed process map of the current arrangements is set out in Appendix B.

The draft report considered holistic changes to the current arrangements. In particular, strawperson option 2 envisaged centralising the cost-benefit assessment of ISP projects in the ISP by removing the net benefits assessment of credible options from the RIT-T. As outlined in section 2.1.2, many stakeholders supported further consideration of strawperson option 2 to streamline the economic assessment process. Submissions also raised questions about how it would operate in practice and the impact on rigour.

The Commission has proposed significant reform through its TPIR Stage 2 and 3 recommendations. We consider the further improvements we identified are a natural evolution of these reforms as the new processes mature, but represent a material change from the current frameworks for the ISP and RIT-T. We are of the view that further changes should wait until the new arrangements are in place and we can assess their impacts. We also acknowledge the concerns raised by stakeholders that there are further issues to work through. As a result, we recommend further developing future improvements to the economic assessment process in the AEMC's upcoming ISP review. We will use this Review's findings as a starting point, but we remain open to considering alternative reform options, as part of our ISP review.

2.3.1 Reinforcing the central role of the ISP could further support timely and efficient delivery

Compared to the existing process, centralising the cost-benefit assessment in the ISP could produce more efficient decision-making in transmission planning, in the long-term interest of consumers. While the RIT-T analysis explores alternative credible options for a given actionable ISP project, it does not explore interactions with the various credible options that exist for *other* ISP projects. The ISP can better examine these interdependencies and consider the efficiency of all the ISP projects holistically as it is a system-wide planning process.

The Commission also considers that the identified reform opportunities could facilitate more timely delivery of projects, leading to better outcomes for consumers. Removing the need for TNSPs to assess project benefits could improve end-to-end project delivery timeframes for ISP projects. The Commission understands that the RIT-T cost-benefit analysis may require many months to complete, contributing to the time required to complete the RIT-T.[53] The Commission does not expect that this would necessarily translate to a six month time saving in terms of overall project delivery. For example, if the net benefits assessment of ISP projects is centralised in the ISP, the ISP process might need to incorporate a different approach to engaging with stakeholders. This would be important to ensure we retain an adequate level of rigour.

53 RIT-T documents typically note that leading up to the PADR, six to nine months is required to conduct the market modelling for each option and scenario, respond to feedback on the Project Specific Consultation Report (PSCR), and determine the draft preferred option. For example, see: Transgrid, *Reinforcing the New South Wales Southern Shared Network to increase transfer capacity to the state's demand centres*, PSCR, 25 June 2019, p. 6. The Commission understands that updates to the RIT-T benefits modelling may also take place after the PADR is published, to address stakeholder feedback.

2.3.2 The AEMC's ISP review will develop further improvements to the economic assessment process

In identifying further reform opportunities to improve the economic assessment process, the Commission has engaged extensively with the market bodies, network businesses, the jurisdictional reference group, the consumer reference group and other stakeholders. This process has uncovered a range of issues and considerations for further design development. In this section, we discuss our envisaged improvements and the key issues raised by stakeholders. This will form the starting point for further development in our ISP review.

Extending the ISP: centralising the cost-benefit analysis and option identification

We consider there is value in exploring the possibilities to centralise the cost-benefit assessment and credible option identification in the ISP. AEMO could take a more holistic transmission system perspective when performing these tasks, which could lead to more efficient decision-making, and streamlining the cost-benefit assessment to support more timely delivery of ISP projects.

This would mean that we bring forward some of the analysis and consultation that TNSPs currently undertake in the RIT-T to the ISP stage. The ISP would need to narrow down a set of credible options that the TNSP can subsequently compare on the basis of their costs (if we remove the net benefit assessment of credible options from the RIT-T). This would require the set of credible options to have reasonably similar gross market benefits.[54]

The Commission agrees with stakeholders that this will require a material improvement of the ISP inputs, assumptions and modelling as well as strengthened stakeholder consultation.[55] This will be a key design question for further investigation in the ISP review as the specificity of the ISP analysis will have significant impacts on AEMO's resourcing, the cost and complexity of improving the ISP process, and the time required to prepare an ISP. This will be relevant for understanding if a centralised benefits assessment and earlier option identification through the ISP would significantly improve project delivery timeframes.

More collaborative joint planning: improving the quality of the inputs and assumptions that inform the ISP

The Commission sees an opportunity to improve the robustness of the ISP analysis through a more collaborative approach to joint planning between AEMO and TNSPs to provide:

- more accurate cost information, and
- greater confidence that the options considered in the ISP are genuinely credible, based on TNSPs' preparatory activities.

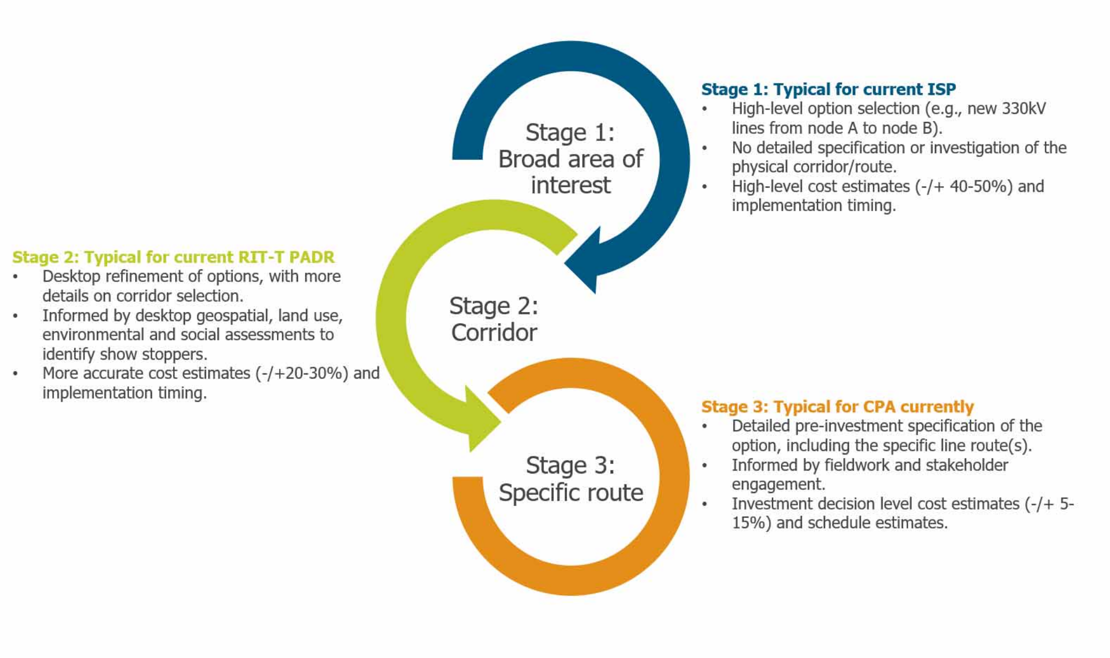
As highlighted in Figure 2.4 above, under the existing arrangements credible options to meet system needs are iteratively identified and developed by TNSPs and AEMO through joint

54 If the RIT-T chooses between credible options on the basis of cost, the selection will not take account of any differences in gross market benefits. If there are large differences in the gross market benefits, there are likely also large differences in costs with the options with higher market benefits often also having higher costs. The options with higher gross market benefits will therefore not likely be selected on the basis of costs. This situation can be avoided if the credible options to deliver an actionable ISP project identified at the ISP stage and further considered in the RIT-T all have similar gross market benefits.

55 AEMO, the Consumer Reference Group and TNSPs raised these concerns in bilateral meetings.

planning. Through this process the level of design detail increases and cost estimates become more accurate (see Figure 2.5).

Figure 2.5: Information quality improves as credible options are refined



Source: AEMC.

Stakeholders have highlighted the importance of effective joint planning in developing the ISP inputs and assumptions throughout this Review.[56]

The Commission considers that increased collaboration between AEMO and TNSPs is key to:

- improving the quality of information that the ISP receives in relation to the range of credible options, their estimated costs, and the level of confidence that they are 'deliverable'
- extending the ISP analysis to provide confidence in its role as the single, centralised process for assessing the costs and benefits of ISP projects. Among other things, this would rely on TNSPs sharing with AEMO the detailed knowledge of their networks and local system impacts that the ISP would need to consider.

The objective of our TPIR Stage 2 and Stage 3 recommendations is to ensure that a sound understanding of land use, environmental, cultural heritage, and other social impacts guides the identification of credible options and subsequently the selection of the preferred option to deliver an actionable ISP project. These reforms will support TNSPs in providing higher quality information to the ISP.

56 For example, AEMO, submission to the consultation paper, p. 7.

The Commission notes feedback from AEMO and TNSPs that it will be important to see how these new arrangements will work in practice, to make a more informed decision on the scope for extending the ISP analysis, and how this will impact the time and cost of the economic assessment process.[57] Improving joint planning will likely be a key area of focus in the ISP review.

Reforming the RIT-T: Removing the net benefits assessment

Based on expanding the ISP analysis to centralise the option identification and cost-benefit assessment, we consider there is value in exploring whether we can remove the net benefits assessment of credible options from the RIT-T. Under such a streamlined process for ISP projects a TNSP would focus on further refining the:

- *Design of the credible option(s) specified in the ISP*, including consideration of alternative routes that fall within the corridor defined for the credible option(s), based on a TNSP's more detailed investigation of land use and other relevant factors.
- *Cost estimates* to select the design with the lowest cost (also having considered social licence cost) as the preferred option.

The Commission considers that – if the ISP analysis is extended in the ways outlined above – there may no longer be a need for the RIT-T net benefits assessment of credible options. This is because the ISP analysis will already have considered which credible options to meet system needs should form part of the ODP, based on information of a similar quality to the RIT-T today. Further, the feedback loop would continue to provide an important safeguard to ensure that the preferred option the RIT-T selects is aligned with the ODP and in the long-term interest of consumers. In this context, there may be limited value in re-assessing the net benefits of credible options in the RIT-T, considering the time and complexity that is involved.[58]

The Commission notes stakeholder feedback that removing the net benefits assessment of credible options from the RIT-T may reduce opportunities to reconsider the cost-benefit analysis of actionable projects in light of new information. However, we consider that our Stage 2 and 3 recommendations will improve the quality of the information available to TNSPs and AEMO in planning processes. This will also apply to the ISP, which would have improved information to draw on and will be more likely to identify all credible options earlier in the process.

If new information arises that has not been included in this increased analysis, the TNSP would determine if it changes the cost or deliverability of specific options during the RIT-T. If it changes the cost of specific options, this should be incorporated into the TNSP's cost analysis. This would include increased costs to obtain and maintain social licence associated with specific options. If the new information impacts the timely delivery of specific options, so they would no longer be credible, that option should be removed from the TNSP's analysis.

57 Feedback was provided by AEMO and TNSPs in workshops and working groups held between the draft and final report.

58 As these reform opportunities are further developed, it may be appropriate to consider whether any aspects of the feedback loop analysis should be reconsidered. For example, the Commission understands that currently the feedback loop does not specifically check that the preferred option has a positive net market benefit (even though this is highly likely to be the case if a project passes the feedback loop).

The Commission considers if the new information means no options remain credible then AEMO should determine the appropriate course of action considering the impact on other projects in the ISP.

Further, the Commission notes that if an ISP project is actionable, this means that AEMO has concluded that it needs to be delivered in the very near future. In this context, the Commission considers that consumers are best served by a regulatory framework that prioritises timely project delivery rather than ongoing reassessment of the benefits case. To the extent that there is a strong case for the net benefits of an actionable project to be re-assessed, it may also be that AEMO is better placed to undertake this (rather than the TNSP in the RIT-T), given the potential for flow on impacts to other ISP projects.

We also acknowledge stakeholder feedback that the RIT-T currently provides an opportunity for interested stakeholders to engage with TNSPs on the benefits modelling and to understand how the TNSP has selected the preferred option.[59] If we remove the net benefits assessment of credible options from the RIT-T we will likely need to reconsider opportunities for stakeholders to engage on benefits within the overall economic assessment process.

59 Feedback from the Consumer Reference Group and TNSPs in workshops and meetings.

3 ALIGNING THE REGULATORY FRAMEWORK FOR TRANSMISSION PLANNING WITH THE TRANSITION TO NET ZERO EMISSIONS

BOX 4: KEY RECOMMENDATION

The Commission recommends a rule change process to harmonise the NER with the imminent inclusion of emissions reduction in the national energy objectives.

The Commission recommends that rule change process should focus on key areas for harmonisation across the national regulatory framework, including changes to ensure that the benefits of emission reductions are considered in transmission planning.

3.1 The Commission recommends a rule change to harmonise the rules with the revised national energy objectives

3.1.1 Our recommendation will promote timely and efficient transmission investment to achieve net zero

The Commission recommends a rule change process to harmonise the NER with the revised energy objectives, once emissions reduction is included in the objectives. This rule change process would include considering changes to the transmission planning framework to reflect the emissions reduction objective.

The Commission's recommendation supports emissions reduction

Stakeholders have expressed significant interest in the treatment of emissions reduction in transmission planning. Consequently, a key focus of the Commission in the Stage 3 draft report was to provide transparency and clarity on how emissions reduction is currently factored into transmission planning, and how this drives investment decisions that will help achieve net zero.[60]

The Commission also committed to continue to monitor developments with respect to climate legislation to ensure it is appropriately factored into transmission planning in the future. The Commonwealth's consultation on incorporating emissions reduction into the national energy objectives (discussed in greater detail below) has led to our recommendation for a harmonising rule change. A harmonising rule change would help to ensure that transmission investment decisions transparently balance emissions, price, quality, safety, reliability and security, supporting the energy transition to net zero.

60 See Chapter 3 of the TPIR Stage 3 draft report. Emissions reduction is currently captured in the transmission planning process through AEMO's scenario planning, with scenarios in the ISP explicitly capping the level of emissions in the NEM to be consistent with public policy settings. This scenario planning approach flows through to the application of the RIT-T.

The Commission's recommendation supports transparency and clear and predictable rules

The Commission considers that a consultative rule change process will help to ensure that incorporating the revised national electricity objective into the NER occurs transparently and leads to clear and predictable rules. Emissions reduction will be a pertinent consideration in many areas of the NER – such as the economic assessment and revenue determination processes – and a consistent approach to considering emissions reduction will be important to reduce administrative burden.

3.1.2 Our recommendation has been shaped by the evolving policy landscape and stakeholder interests

In late 2022, the Commonwealth Government released a consultation draft of a Bill that includes in the national energy objectives the achievement of targets for reducing greenhouse gas emissions to which the Commonwealth, a State or a Territory has made a public commitment.[61]

The proposed change would include emissions reduction in the economic efficiency framework of the national energy objectives. A consequence of this change would be the requirement for regulatory decisions to balance emissions reduction with the existing limbs of the national energy objectives – price, quality, safety, reliability and security. The market bodies would be required to consider emissions reduction alongside other limbs of the national energy objectives, but retain the discretion to balance these components when making decisions (as is currently the case).[62]

At the 24 February 2023 meeting of the Energy and Climate Change Ministerial Council, ministers committed to agree the final Bill by July 2023.[63]

The Commonwealth Government's consultation on incorporating an emissions objective into the national energy objectives commenced between our Stage 3 draft and final reports, with stakeholders expressing views on the impact of the Commonwealth's proposed change in submissions to our draft report.[64] Stakeholders broadly supported incorporating emissions reduction into the regulatory framework for transmission planning in their submissions to our draft report.[65] For instance, ENA suggested that the Commission outline how the transmission planning framework may need to evolve with respect to the treatment of emissions reduction[66] and AEMO recommended emissions reduction be added as a class of market benefit.[67]

61 Commonwealth Government, *National Energy Laws Amendment (Emissions Reduction Objectives) Bill 2023*, Consultation draft, 20 December 2022, section 4. The section then provides further detail on the types of targets that would be included.

62 In relation to AEMC decisions, see NEL section 88(2): "the AEMC may give such weight to any aspect of the national electricity objective as it considers appropriate in all the circumstances…".

63 Energy and Climate Change Ministerial Council, meeting communique, 24 February 2023. After being agreed by energy ministers, the Bill would then need to pass through South Australian Parliament.

64 Commonwealth Government, *Incorporating an emissions reduction objective into the national energy objectives,* Consultation paper, 20 December 2022.

65 Submissions to draft report: AEMO, p. 13; CEC, p. 4; CEIG, pp. 9-10; ENA, p. 3; Transgrid, p. 3.

66 ENA, Submission to draft report, p. 3.

67 AEMO, Submission to draft report, p. 13.

The Commission agrees with stakeholders that amendments to the transmission planning framework may be required to reflect the revised energy objectives. We recommend a rule change process to consider harmonising rule changes, to allow for appropriate stakeholder consultation.

3.1.3 Our recommendation supports the policy intent of including emissions reduction in the energy objectives

The overarching aim of reforming the national energy objectives is to incorporate Australia's target of net zero emissions by 2050 into the energy regulatory framework.[68] The national energy objectives are foundational for the work of the energy market bodies. Under the National Electricity Law (NEL):

- The AEMC may only make a rule if it is satisfied that the rule will or is likely to contribute to achieving the national electricity objective.[69]
- The AER must exercise its economic regulatory functions or powers in a manner that will or is likely to contribute to achieving the national electricity objective.[70]
- AEMO must have regard to the national electricity objective in carrying out its functions.[71]

Including emissions in the energy objectives lays the foundation for the decarbonisation of the energy market, with transmission being a key enabler of this transition.

However, there are a number of instances throughout the Rules where limbs of the energy objectives, but not the energy objectives themselves, are referenced. This means that any changes to the energy objectives would not automatically flow through to these provisions. As a result emissions reduction would not automatically be considered alongside the other limbs in these instances without a harmonising rule change.

Without rule changes the policy intent of the change to the objectives might not take full effect, leading to regulatory uncertainty for stakeholders and increased administrative burden for the AER (in its economic regulatory functions) and AEMO (in its development of the ISP). Amendments to the rules will lead to consequential changes being required to guidelines and processes, including those relating to transmission planning and investment, improving certainty and consistency across the market.

Our recommendation of a rule change to harmonise the NER with the revised energy objectives would support the policy intent of including emissions reduction in the energy objectives.

3.2 How our recommendation would operate

The Commission recommends a harmonising rule change once the national energy objectives have been revised to include the emissions reduction objective. We have considered

68 Commonwealth Government, *Incorporating an emissions reduction objective into the national energy objectives,* Consultation paper, 20 December 2022, p. 1.

69 NEL section 88.

70 NEL section 16(1)(a).

71 NEL section 49(3).

transmission planning provisions in the NER that may be candidates for harmonisation. Proper consideration of these issues will occur with public consultation during a formal rule change process after the *National Energy Laws Amendment (Emissions Reduction Objectives) Bill 2023* is agreed. Prompt changes to the Rules will be needed to facilitate timely guideline and process updates, for example in relation to AEMO's 2026 ISP (see Figure 3.1, below).

The Commission has identified three illustrative areas for potential reform in transmission planning provisions of the NER to harmonise with the proposed new national electricity objective as a starting point:

- Including emissions reductions as a class of market benefit to be considered in the ISP, RIT-T and regulatory investment test for distribution (RIT-D)
- Clarifying the range of policies AEMO takes into account in the ISP to ensure alignment with the new national electricity objective
- Changing references to the 'long term interests of consumers' in ISP provisions to references to the national electricity objective.

The following sections discuss these potential reform areas in greater detail (noting that different or additional rule changes may also be considered during this process or in a subsequent rule change process, such as amending the capital expenditure and operating expenditure objectives).[72]

3.2.1 Including emissions reductions as a class of market benefit

The first illustrative area for potential reform is the classes of market benefit examined as part of the economic assessment process for network investments. A harmonising rule change request should consider whether including emissions reductions as a class of market benefit would contribute to achieving the revised NEO. Including emissions reductions as a class of market benefits would ensure that emissions reductions are explicitly balanced against the other limbs of the NEO in the economic assessment processes.

AEMO must consider specified classes of market benefits that could be delivered by the projects in the ISP that together address power system needs when developing the ISP.[73] Each of these market benefits have a clear link to an existing limb of the energy objectives, ie they each relate to price, quality, safety, reliability or security.[74] There is also the potential to include "other classes of market benefit" agreed with the AER or specified by the AER in its *Cost Benefit Analysis Guidelines.*[75] Identical classes of market benefit are relevant for both

72 While the focus of this Review is on transmission planning, it may be appropriate for a harmonising rule change to have a broader remit, eg, considering similar provisions in the NER relating to distribution planning, and in the National Gas Rules relating to gas networks, for clarity and consistency across the network planning frameworks.

73 Clause 5.22.10(c)(1) of the NER.

74 The classes of market benefits are: changes in fuel consumption arising through different patterns of generation dispatch, changes in voluntary load curtailment, changes in voluntary load curtailment, changes in involuntary load shedding, changes in costs for parties due to differences in the timing of new plant, differences in capital costs and differences in operating and maintenance costs, differences in the timing of expenditure, changes in network losses, changes in ancillary services costs, competition benefits and any additional option value.

75 Clause 5.22.10(c)(1)(x) of the NER.

the RIT-T and RIT-D,[76] and if changes are made to the ISP provisions the same changes could be considered for the RIT-T and RIT-D provisions.

In principle, it would be desirable to have a consistent approach to accounting for emissions reductions across the ISP, RIT-T and other economic assessment processes for network investments. Adding emissions reductions as a standard class of market benefit via a rule change may help drive a consistent approach to valuing emissions reduction across network service providers and projects. The AER would alternatively have to consider these issues on a case-by-case basis under the "other classes of market benefit" provision in every RIT-T or RIT-D process (if requested to do so by the relevant RIT proponents), which would be administratively burdensome for the AER, AEMO and individual RIT proponents. Further, relying on the "other classes" provision would not ensure that emissions are considered in every case, and may result in emissions impacts being considered in some projects but not others.

Including emission reductions as a market benefit could also help to clarify that references in other transmission planning provisions in the NER to the "net economic benefit to all those who produce, consume or transport electricity in the market" includes the benefits of emission reductions.[77]

The Commission notes that amending the classes of market benefits would likely require the AER to update its guidelines, to provide guidance on how emission reductions should be taken into account. These guidelines, once updated, would then affect the development of the ISP and the application of the RIT-T (and RIT-D), particularly in relation to how emissions reduction benefits are valued in the analysis.

For instance, clause 5.16.2(c)(6) of the NER requires the AER's *RIT-T Application Guidelines* to provide guidance and worked examples as to the acceptable methodologies for valuing market benefits. While these guidelines apply to non-actionable ISP projects, the AER's *Cost benefit analysis guidelines* currently reference the guidance provided in the *RIT-T Application Guidelines* in valuing each class of market benefit for actionable ISP projects.[78]

Figure 3.1 summarises these interactions and outlines indicative timing for the potential rule change[79] and consequential guideline changes in order to feed into AEMO's 2026 ISP and network investment processes.

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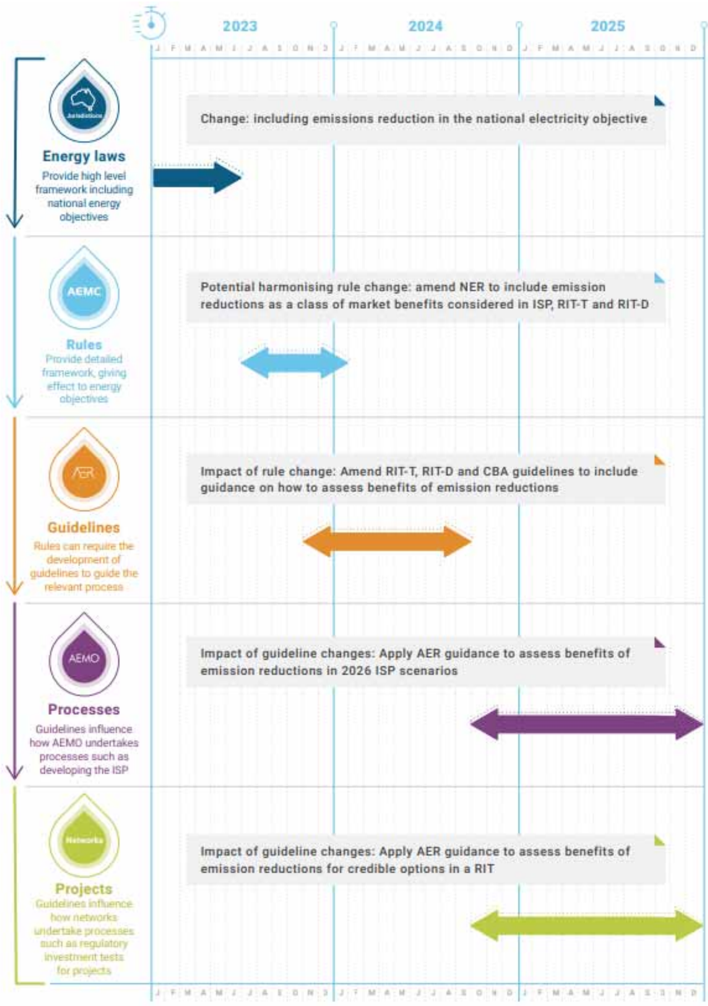
76 See clauses 5.15A.2(b) and 5.17.1(c) of the NER.

77 This phrase is used in several transmission planning provisions, for example cl 5.12.1 on the transmission annual planning review, cl 5.15A.1 on the purpose of the RIT-T, and cl 5.15A.2 on the principles for RIT-T projects that are not actionable ISP projects, as well as in similar provisions for distribution planning. If including emissions as a market benefit is not considered to be sufficient to clarify that this phrase includes emissions benefits, a rule change could consider directly amending this phrase.

78 AER, *Cost benefit analysis guidelines,* August 2020, p. 27.

79 While for simplicity Figure 3.1 refers to an AEMC rule-making process, as an alternative process the South Australian energy minister could make this rule change, if the amendments to the energy laws include a rule-making power for this subject. A recent example of a Minister-made rule amending the NER is the *National Electricity Amendment (Regulatory sandboxing) Rule 2022*, relying on NEL section 90DA.

Figure 3.1: Interactions between energy laws, rules, guidelines and processes in the example of adding a class of market benefit



Source: AEMC.
Note: AEMO and network processes will extend beyond 2025.

3.2.2 Aligning public policies considered in the ISP with the national energy objectives

The second illustrative area for potential reform is the scope of public policies that AEMO considers in the development of the ISP, through the 'public policy clause' of the NER.[80] The Commission recommends the harmonising rule change process consider whether to harmonise the scope of these policies with the scope of emissions policies that are relevant under the revised NEO.

80 Clause 5.22.3(b) of the NER.

The Stage 3 draft report highlighted that the public policy clause permits AEMO to consider a current environmental or energy policy of a participating jurisdiction when determining power system needs (the needs which the ISP is intended to achieve), provided that:

- the policy has been sufficiently developed to enable AEMO to identify the impacts of it on the power system, and
- at least one of the following is satisfied:
    - a commitment has been made in an international agreement to implement that policy
    - that policy has been enacted in legislation
    - there is a regulatory obligation in relation to that policy
    - there is material funding allocated to that policy in a budget of the participating jurisdiction, or
    - the Ministerial Council of Energy (MCE) has advised AEMO to incorporate the policy.

The emissions reduction targets in the December 2022 draft of the energy objectives include targets stated publicly as a matter of policy by the Commonwealth, a State or a Territory. There are no requirements relating to enactment or funding.[81] This is a broader scope of policies than the NER public policy clause currently permits AEMO to consider for the purposes of determining power system needs.

A rule change could consider whether the breadth of policies AEMO takes into account in determining power system needs should align with those contemplated in the final national energy objectives, to give full effect to the new objectives, noting AEMO's view that the current wording of that clause provides an appropriate threshold for sufficiently developed policies to be included in the ISP. The Commission also notes that jurisdictions sought greater clarity on how each of their emissions reduction ambitions are included in transmission planning under the current NER public policy clauses in discussions in the jurisdictional reference group.

3.2.3 Updating references to the long-term interests of consumers in ISP provisions

The third illustrative area for potential reform is references to the long term interests of consumers in two ISP provisions in the Rules. Updating references to the long term interests of consumers could improve clarity and transparency and should be considered in a harmonising rule change process.

The national electricity objective involves the long-term interests of consumers of electricity *with respect to* several specified matters (including price, quality, safety, reliability and security of supply of electricity). This will be extended to include emissions reductions as discussed above. There are two ISP provisions in the NER that use the phrase 'long term interests of consumers' (without any specified matters), rather than referring to the national electricity objective.

81 Commonwealth Government, *National Energy Laws Amendment (Emissions Reduction Objectives) Bill 2023*, Consultation draft, 20 December 2022, section 4.

Clause 5.22.2 of the NER states that the purpose of the ISP is to:

> *…establish a whole of system plan for the efficient development of the power system that achieves power system needs for a planning horizon of at least 20 years for the **long term interests of the consumers of electricity** [emphasis added]*

Clause 5.22.7(d)(2) requires the ISP consumer panel, in preparing the consumer panel report, to have regard to the long term interests of consumers.

Updates to the national electricity objective will not necessarily flow through to these two ISP clauses because these clauses do not explicitly refer to the objective. Updating these provisions in the Rules to explicitly refer to the national electricity objective would clarify that the long-term interests of consumers involves balancing all limbs of the national electricity objective, including emissions reductions.

4 MANAGING RISK AND UNCERTAINTY THROUGH TARGETED EX POST REVIEWS

BOX 5: KEY RECOMMENDATIONS

The Commission's final recommendation is to amend the NER to facilitate a targeted ex post review mechanism that the AER can apply to capex incurred on completed ISP projects. The new mechanism would be separate to the existing ex post review mechanism, which would be limited to all capex incurred on non-ISP projects over the five year ex post review period. Proposed rule drafting is published with this report.

The Commission's recommendation to review ISP capex separately from non-ISP capex will:

- address the potential additional risk associated with ISP projects, where the expenditure is significant and the risk of overspend is greater, and which are very different from the types of projects that have been delivered in the past, and
- improve the effectiveness of the AER in conducting its role in ensuring that ISP projects are delivered efficiently.

4.1 The Commission recommends introducing a targeted ex post review for ISP projects

4.1.1 Our recommendation promotes efficient outcomes by clarifying the ex post review arrangements

We recommend introducing a targeted ex post review mechanism for completed ISP projects. Our recommended rule explicitly separates ex post reviews for ISP project capex and non ISP capex.[82] Only the overspend of past capex considered in the respective ex post review (that is, specific ISP project capex or non-ISP capex) would be open for potential exclusion from the regulated asset base (RAB).

The Commission's recommendation reduces risk and uncertainty, promoting economic efficiency

TNSPs have expressed concern that under the current arrangements there is uncertainty around the treatment of non-ISP capex where a capex overspend has occurred on a specific ISP project.[83] Specifically, TNSPs are uncertain whether non-ISP capex could be subject to exclusion from the RAB if a TNSP has overspent on ISP project capex only. This uncertainty in the regulatory framework could result in inefficient outcomes for consumers, if it creates material risks that are outside a TNSP's control. Our recommendation would address this issue identified with the current ex post review mechanism. Introducing a targeted ex post

82 I See attached indicative rule drafting for further detail on the recommended rule.

83 Submission to the Stage 3 draft report: ENA p. 12; Transgrid, p. 8.

review for ISP projects clarifies the treatment of both ISP project capex and non-ISP project capex in the context of an ex post review and in doing so would promote efficient delivery of major transmission projects. This would then help to ensure consumers pay the efficient costs for major transmission investment in the NEM.

The Commission's recommendation supports efficient implementation of the new arrangements

Our recommendation is to introduce the concept of an ISP overspending requirement in the Rules which is specific to ISP projects and covers the entire period in which a TNSP incurs capex to deliver an ISP project. The AER would have access to complete information on matters such as project specific capex drivers, management practices and processes when undertaking a targeted ex post review of ISP capex incurred over the delivery period. This will enable the AER to rigorously consider and assess the overall prudency and efficiency of capex incurred on a specific ISP project where there has been an overspend. This should reduce the administrative burden for both the AER and TNSPs by reducing the time and effort required to gather and assess information and evidence that is required to determine the materiality and efficiency of the overspend on projects that cross multiple review periods. It should also support the AER in undertaking its functions in a way that reduces costs to consumers.

4.1.2 Stakeholder feedback has informed the case for change and has shaped this recommendation

The Commission considers there is a case to create an ISP project specific approach to better accommodate ISP project capex, and increase certainty relating to the overall approach to the ex post review of TNSP capex more generally.

Both ENA and Transgrid raised the concept of a targeted ex post review as a way to address concerns related to uncertainty around the treatment of non-ISP capex where a capex overspend on an ISP project has occurred.[84] Other stakeholders also supported clarifying the ability of the AER to conduct a project-specific ex-post review to examine TNSPs' expenditure where the TNSP's capital expenditure allowance for those projects is exceeded.[85]

The AER has also uncovered an issue with respect to the current ex post review window which limits the review of past capex to a five-year review period, even where a TNSP may incur capex on an ISP project over a longer period.

These two concerns stem from several sources:

1. **Specification of the current "overspending requirement" in the Rules:** The current overspending requirement applies to a TNSP's total capex on all projects within its

84 In their submissions to both the consultation paper and Stage 3 draft report, the ENA and Transgrid suggested introducing a targeted ex post review process that enables the AER to examine specific ISP projects as a means of improving the accuracy of TNSP capital expenditure forecasts. See: Submissions to the consultation paper: ENA, pp. 9-11; Transgrid, p. 5; and submissions to the Stage 3 draft report: ENA, pp. 2, 12, Transgrid, p. 8.

85 Submissions to the Stage 3 Draft Report: CEIG, pp. 3,12; AER, p. 8; Marinus Link, pp. 5-6; PIAC, p. 10; TasNetworks, p. 3.

portfolio across the review period.[86] This requirement creates uncertainty around the AER's ability to target an ex post review to capex associated with a single ISP project.[87]

2. **Inclusion of high level guidance on the approach to the ex post review of ISP capex in an AER guidance note:** The AER is required to include in its *Capital Expenditure Incentive Guidelines* an explanation of the manner in which it will make a determination where the overspending requirement is met.[88] However, the AER's proposed approach to an ex post review of ISP projects is currently included in the AER's guidance note on the *Regulation of actionable ISP projects*. This could lead to uncertainty as the guidance on the application of the ex post review arrangements to ISP capex is not required by the Rules, and the AER does not need to consult with stakeholders when amending it.
3. **Definition of "review period" in the Rules:** When considering how a TNSP's actual capex compares to its forecast allowance, the AER is required to look back across a five-year review period.[89] Challenges can arise for the AER where it identifies an overspend that can be attributed to capex incurred on an ISP project being delivered across a period longer than the five-year review period. It can be difficult for the AER to assess the materiality and efficiency of that overspend without complete information on the ISP project, including the project's specific capex drivers and management practices and processes.

The Commission considers that these issues could impact the efficient delivery of ISP projects to the detriment of consumers for the following reasons:

- The size and scale of ISP projects exacerbate the risk that an ex post review may be triggered. The lack of clarity around whether an overspend on an ISP project could subject all capex incurred by a TNSP – including non-ISP capex – to a detailed ex post review by the AER creates new risks for TNSPs.
- Limitations on the AER's ability to look in detail at capex overspends on ISP projects extending beyond the five-year review period could reduce the effectiveness of the ex post review process and result in increased costs to consumers.

4.2 How our recommendations would operate and be implemented

The Commission recommends rule changes to facilitate a targeted ex post review mechanism for completed ISP projects.[90] The new mechanism for the ex-post review of ISP project capex would:

- separate the review of ISP project capex from non-ISP capex

86 The overspending requirement is specified in clause S6A.2.2A(c) of the NER.

87 In the AER's *Regulation of actionable ISP projects* guidance note, the AER states that, although the ex post review process applies to a TNSP's total capex allowance for the previous regulatory control period, the AER has the flexibility to focus on individual projects within that allowance (such as actionable ISP projects). See: AER, *Regulation of actionable ISP projects* Guidance Note, March 2021, p. 33.

88 Rule 6A.5A(b)(2) of the NER.

89 Under clause S6A.2.2A(a1) of the NER.

90 The Commission is not proposing changes to the existing margin requirement or capitalisation requirement in the ex post review clause. These can already be applied on a project-specific basis.

- change the period over which the ISP project capex is reviewed.

Table 4.1 below provides a high level comparison of the key features of the current ex post review arrangements and the Commission's recommendation.

Table 4.1: Comparison of key features of the ex post mechanism under the current and proposed Rules

FEATURE	CURRENT APPROACH	PROPOSED APPROACH
Trigger for ex post review (section 4.2.1)	Ex post review triggered where total capex incurred over the five-year review period exceeds total forecast capex for that period (the current overspend requirement in the Rules).[1]	Targeted ex post review of ISP project capex triggered where capex incurred on an *ISP project* completed in the review period exceeds forecast capex for that project.[2]
		Ex post review of non-ISP capex triggered where capex incurred on *non-ISP projects* exceeds forecast capex for all non-ISP projects during the review period.[3]
Approach to exclusions from the RAB (section 4.2.1)	The amount open for exclusion from the RAB is limited to the level of overspend above the total capex allowance for the five-year review period that the AER determines does not meet the capex criteria.[4]	For an *ISP project ex post review*, the amount of capex open for exclusion from the RAB would be limited to the level of overspend on that project above the forecast capex allowance for that project that the AER determines does not meet the capex criteria.[5]
		For a *non-ISP ex post review*, the amount of capex open to exclusion from the RAB would be limited to the level of overspend above the capex allowance for non-ISP projects for the five-year review period that the AER determines does not meet the capex criteria.[6]
Review period (section 4.2.2)	The 'review period' (the relevant period of TNSP spending which the AER considers in an ex-post assessment) is defined as:	For an *ISP project ex post review*, the new term 'ISP project review period' is the regulatory years, of one or more regulatory control periods, in which capex was incurred in relation to a reviewable ISP project. Therefore, it is all the years in which capex is incurred for that ISP project, including where that capex is incurred over multiple regulatory control periods and over multiple 'review periods' (as currently specified in the Rules). The definition of 'review period' applies for

FEATURE	CURRENT APPROACH	PROPOSED APPROACH
	• the first three years of the regulatory control period just ending, and • the last two years of the preceding regulatory control period.[7]	the purposes of determining when the project is completed and therefore when the ex post review commences. Whereas the definition of 'ISP project review period' applies for the purposes of determining the years in which capex was incurred for an ISP project. *A reviewable ISP project* is an ISP project that has been completed in the five year period since the previous ex post review window. For a *non-ISP ex post review*, the review period would be the same five-year period as currently specified in the Rules.
Timing of an ex post review (section 4.2.3)	The AER undertakes an ex post review at the time it prepares a draft decision on a TNSP's regulatory determination for the next regulatory control period.	No change to current approach.
Information in AER guidelines (section 4.2.4)	The process for ex post review is set out in the AER's *Capital Expenditure Incentive Guidelines*. The AER's guidance note on the *Regulation of actionable ISP projects* provides additional guidance on the application of ex post review to ISP capex.	The AER would need to update its *Capital Expenditure Incentives Guidelines* to comply with the new process for a targeted ex post review for ISP capex.[8] Transitional rules would specify that the AER is to make these updates by the date the substantive changes to the Rules take effect.[9]

Note: [1] Current NER clause S6A.2.2A(c); [2] Proposed new NER clause S6A.2.2A(c1); [3] Proposed amendment to NER clause S6A.2.2(c); [4] Current NER clause S6A.2.2A(f), The capex criteria are set out in clause 6A.6.7(c)(1)-(3) and require the AER to be satisfied that the total of the forecast capex for the regulatory control period reasonably reflects the following: the efficient costs of achieving the capital expenditure objectives, the costs that a prudent operator would require to achieve the capital expenditure objectives, and a realistic expectation of the demand forecast and cost inputs required to achieve the capital expenditure objectives; [5] Proposed amendment to NER clause S6A.2.2A(f), [6] Proposed amendment to NER clause S6A.2.2A(f); [7] Current NER clause S6A.2.2A(a1); [8] The Rules currently require the AER to make and publish the *Capital Expenditure Incentive Guidelines*. The manner in which the AER proposes to make a determination regarding reductions for inefficient past capex if the overspending requirement is satisfied must be set out in these guidelines. The AER may update its guidelines from time to time, provided it complies with the transmission consultation procedures. See current NER rule 6A.5A(b); [9] Proposed new transitional provision in NER chapter 11.

Figure 4.2 at the end of this Chapter illustrates how the recommended targeted ex post review mechanism would operate in practice, compared to the current ex post review mechanism.

4.2.1 Trigger for ex post review of ISP projects and approach to exclusions from the RAB

The Commission recommends that a targeted ex post review of ISP project capex would occur where actual capex incurred on a completed ISP project exceeds the forecast capex allowance for that project. Where a targeted ex post review is triggered, only the capex incurred on the completed ISP project being reviewed would be open to potential exclusion from the RAB.

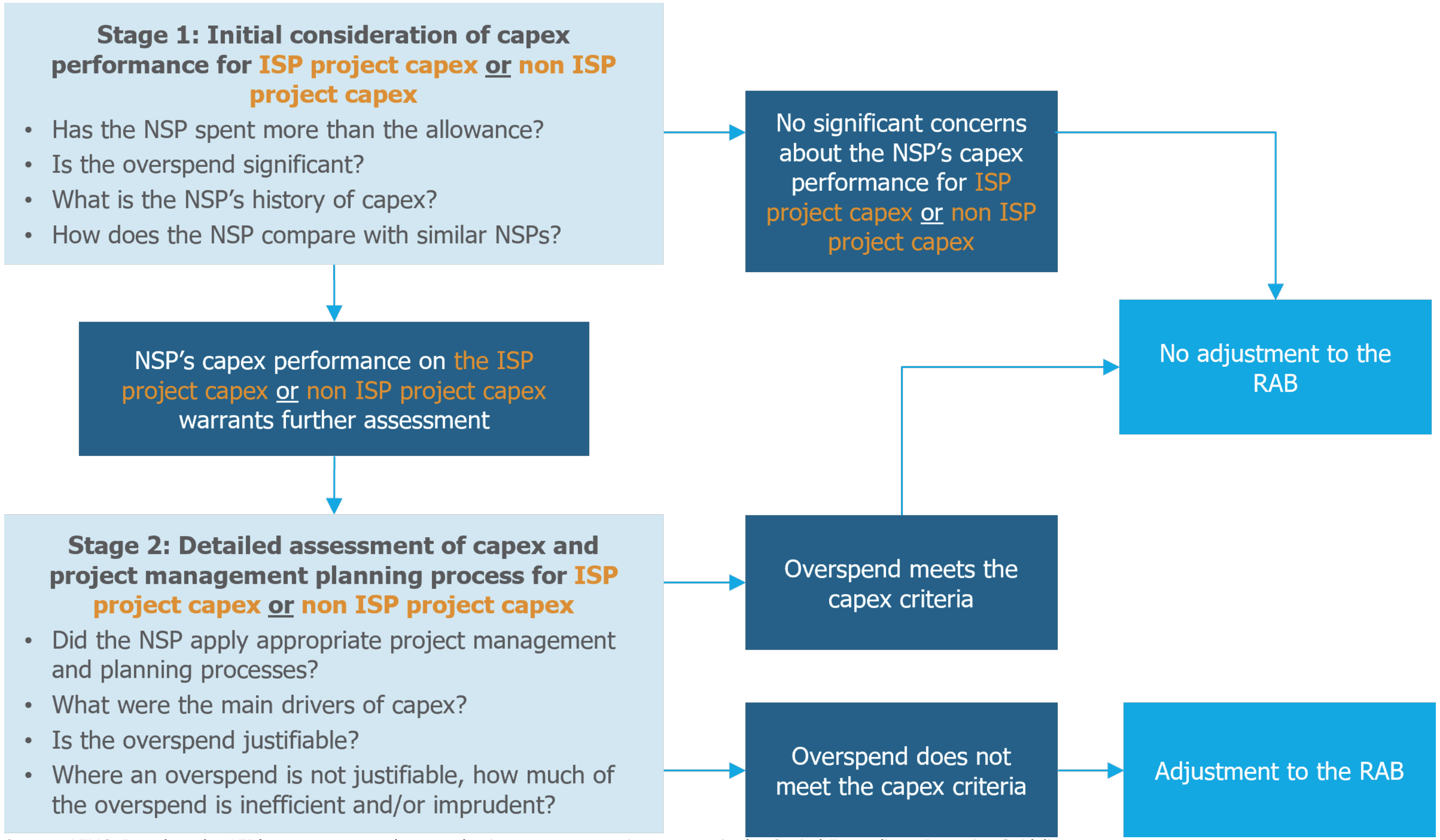
For the avoidance of doubt, non-ISP capex would continue to be subject to ex post review and open to potential exclusion from the RAB where the existing overspending requirement in the Rules was met, ie the overspend was related to non-ISP projects.

The recommended changes to the ex post review trigger, and scope of potential exclusions from the RAB to better accommodate ISP projects, would directly address TNSP concerns regarding risk and uncertainty in the current ex post review arrangements.

The final recommendation would not change the AER’s current approach to conducting an ex post review, other than to require that the process be applied separately to capex incurred on competed ISP projects, and non-ISP capex incurred during the review period.[91] It is expected that the AER would continue to apply its current approach to conducting an ex post review when considering ISP project capex. That is, there would be no difference in the approach to conducting an ex post review of ISP project capex compared to the approach to conducting an ex post review of non ISP project capex. The approach is illustrated in Figure 4.1.

91 We note that the AER has discretion as to how it determines potential reductions in the RAB for inefficient past expenditure. While the Commission’s recommendations have been developed in the context of the AER’s current process for undertaking an ex post review, the AER may choose to make changes to this process if necessary or appropriate, if the recommended rule is made. The AER would, however, be required to consult with industry when making any changes to the current process which is set out in the *Capital Expenditure Incentive Guidelines*.

Figure 4.1: Final recommendations for the ex post review of ISP and non ISP capex



Source: AEMC. Based on the AER's current approach to conducting an ex post review, set out in the *Capital Expenditure Incentive Guidelines*.

An overview of the various adjustments to a TNSP's RAB following a targeted ex post review of ISP capex is provided in Box 6 below.

BOX 6: APPROACH TO RAB ADJUSTMENTS FOLLOWING A TARGETED REVIEW OF ISP CAPEX

- The AER may decide that part or all of an overspend is inefficient or imprudent and should be excluded from the relevant TNSP's RAB following a targeted ex post review of capex incurred on a completed ISP project.
- Inefficient or imprudent capex overspends incurred in years 1, 2 and 3 of the current regulatory control period would not be rolled into the RAB at the end of the period in practice, and consumers would not fund any of this capex.
- However, the AER would need to make a net present value (NPV) adjustment to the RAB where an inefficient or imprudent capex overspend has been incurred in a previous regulatory control period. This is because the overspend incurred in a previous regulatory control period would already have been rolled into the RAB at the end of that period. Consumers will already have funded at least part of this overspend through higher prices.
- The AER would make an NPV adjustment to ensure the TNSP does not retain any revenue through the RAB from capex that does not meet the capex criteria to ensure consumers are compensated for the delay in conducting the ex post review of overspends incurred in a previous regulatory control period.
- Where the AER excludes capex from the RAB after an ex post review, it may also need to make a corresponding adjustment to the capital expenditure sharing scheme (CESS) so that TNSPs do not incur a penalty of more than 100 per cent of an overspend. This may need to occur where the AER undertakes an ex post review several years after it has calculated CESS rewards and penalties.

4.2.2 Review period: All capex for a completed ISP project would be subject to review

The Commission recommends introducing the concept of a 'reviewable ISP project'

The Commission recommends introducing the concept of a '**reviewable ISP project**' under the Rules to enable the AER to consider all capex incurred on an ISP project once it is complete (and where an overspend has been incurred). This would be defined as follows:

- an actionable ISP project that has been commissioned and energised within a review period,[92] or

92 In this case, review period continues to refer to the five year period comprising the fourth and fifth years of the previous regulatory control period, and the first, second and third years of the current regulatory control period. In effect, reference to the review period ensures that, when considering whether the ISP overspending requirement has been met as part of a regulatory determination for a TNSP's next regulatory control period, the AER considers all ISP projects that have been completed since the last time the AER considered whether the ISP overspending requirement had been met (ie as part of the regulatory determination for the TNSP's current regulatory control period).

- if AEMO has staged an actionable ISP project in an ISP,[93] each stage of that project which has been completed within a review period.

The first type of ISP project is an actionable ISP project (specified in the ISP) that has been completed, which is defined in paragraph (1) of the definition, as being commissioned and energised. The second type of ISP project is an actionable ISP project where AEMO has specified it as 'staged' in the ISP. In this case we recommend that each stage of the project be eligible for a targeted ex post review once the stage is completed. For example, this could include projects like Marinus Link where, in the 2022 ISP, it is defined as one single actionable ISP project with cable 1 and 2 specified as distinct stages. Allowing the AER to conduct an ex post review at the completion of a stage, rather than waiting until the entire actionable ISP project is completed, would minimise the risk of delaying the AER review of capex incurred on an actionable ISP project with multiple stages until the final project is completed, which could take multiple five-year periods.[94] We note that in the case of a staged project, completion of a stage may not necessarily be marked by commissioning and/or energisation. For this reason at he proposed definition in paragraph (2) does not refer to these concepts. This change would increase transparency and certainty for TNSPs.

The Commission recommends introducing an ISP project review period

The Commission recommends introducing the concept of an '**ISP project review period**' in the Rules to remove limitations on the AER only considering capex incurred within the existing five year review period.[95] This change would enable the AER to assess and decide the efficiency of any capex overspend incurred on an ISP project running across multiple periods once the project is complete. The review period would cover all years in which capex was incurred on an actionable ISP project (or stage of an actionable ISP project).

Our recommendation would address AER concerns regarding its ability to assess the materiality and efficiency of capex overspends if a TNSP incurs capex on an ISP project across multiple review periods. It will enable the AER to access complete information on matters such as project specific capex drivers and project specific management practices and processes which are important inputs in understanding whether capex incurred is prudent and efficient.

The recommended changes should reduce the administrative burden for both the AER and TNSPs by reducing the time and effort required to gather and assess information and evidence to determine the materiality and efficiency of an overspend. It should also support the AER in undertaking its functions in a way that reduces costs to consumers.

93 Clause 5.22.6(a)(6)(vi) of the NER.

94 For the avoidance of doubt, an actionable ISP project which is being progressed via staged CPAs for the purposes of cost recovery, but which has not been identified in the ISP as a staged actionable ISP project, would not be eligible for an ex post review until the entire project is complete (that is, commissioned and energised) under the recommended Rule.

95 The 'ISP project review period' would be defined as the regulatory years, of one or more regulatory control periods, in which capex was incurred in relation to a reviewable ISP project. Proposed amendment to NER clause S6A.2.2A(a1).

4.2.3 Timing of ex post review: The AER would make a decision on RAB adjustments as part of the draft decision for a TNSP's regulatory determination

The current approach whereby the AER conducts an ex post review at the time it prepares a draft decision on a TNSP's regulatory determination for the next regulatory control period is maintained.

The Commission recognises that delays between when an ISP project is completed and when the AER makes a decision on whether a capex overspend is inefficient or imprudent and will be excluded from the RAB, may create some uncertainty for TNSPs. On balance, the Commission considers it is important that the AER conducts an ex post review of ISP project capex overspend at the same time as an ex post review of non-ISP capex overspend. Ensuring these reviews would (if triggered) run in parallel would:

- avoid unnecessary administrative costs associated with the AER potentially having to conduct multiple ex post reviews across a regulatory control period
- support the AER in assessing relevant data to identify any trends where there has been an overspend of both ISP and non-ISP capex
- provide clarity and transparency to the relevant TNSP around the AER's approach to capital expenditure more broadly – that is, to both past and future capex.

4.2.4 Implementation: The recommended rule changes would require changes to AER Guidelines

The AER would need to update its Capital Expenditure Incentives Guidelines

The current version of the Guidelines set out the AER's approach to excluding certain types of capex from being included in the roll forward of the RAB. If our recommended rule to implement the targeted ex post review mechanism for ISP projects is made, the AER would be required to update its *Capital Expenditure Incentive Guidelines* to distinguish between the treatment of non-ISP and ISP capex.[96] This change would ensure that the manner in which the AER will make a determination regarding reductions for inefficient past ISP capex is subject to consultation and easily accessible in a guideline recognised in the Rules. The recommended change will also ensure the AER's assessment of ISP and non-ISP capex in an ex post review is transparent, further increasing certainty to TNSPs.

The AER would retain flexibility and discretion to determine the manner in which it would make a determination where the recommended ISP overspending requirement is satisfied (consistent with the approach to the existing overspending requirement).

We recommend a transitional rule to provide certainty

A transitional rule would be needed to allow the AER to amend the *Capital Expenditure Incentive Guidelines* (and any other schemes, models and guidelines) to reflect the new ISP provisions before they take effect. This would allow the AER to comply with the new provisions from the date they take effect. This would provide certainty for the AER and TNSPs. We propose a transitional rule as follows:

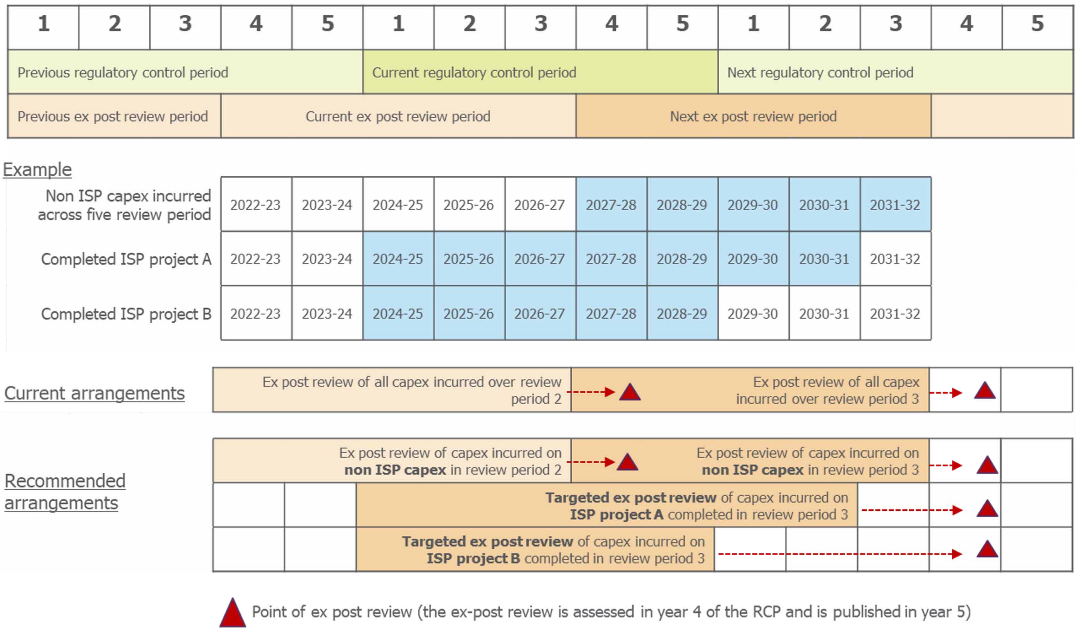
96 Rule 6A.5A(b) of the NER.

- By the effective date of the amending rule, the AER must review and, where necessary or desirable, amend and publish AER procedures, guidelines and other documents to take into account the amending rule.
- The AER must follow the process for amending those documents (if any) specified in the Rules, eg the transmission consultation procedures.
- Amendments to any AER guidelines etc. would take effect on the effective date of the amending rule.

4.2.5 Summary: Operation of a targeted ex post review for completed ISP projects

Figure 4.2 provides an example of how the recommended targeted ex post review mechanism would operate compared to the current ex post review mechanism in the Rules.

Figure 4.2: Overview of the recommended arrangements - targeted ex post review



Source: AEMC. Note the ex-post review is conducted in year 4 of the regulatory control period but is published in year 5.

ABBREVIATIONS

AEC	Australian Energy Council
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Capex	Capital expenditure
CBA	Cost-benefit analysis
CEC	Clean Energy Council
CEIG	Clean Energy Investor Group
CESS	Capital Expenditure Sharing Scheme
Commission	See AEMC
CPA	Contingent project application
ENA	Energy Networks Australia
ESB	Energy Security Board
FFI	Fortescue Future Industries
ISP	Integrated System plan
MCE	Ministerial Council on Energy
MLPL	MarinusLink Pty Ltd
NEL	National Electricity Law
NEM	National Energy Market
NEO	National electricity objective
NER	National Electricity Rules
NPV	Net present value
NSW	New South Wales
ODP	Optimal development path
PACR	Project assessment conclusions report
PADR	Project assessment draft report
PIAC	Public Interest Advocacy Centre
PSCR	Project specification consultation report
PTNSP	Primary transmission network service provider
RAB	Regulated asset base
REA	RE-Alliance
RIT-D	Regulatory investment test for distribution
RIT-T	Regulatory investment test for transmission
TAPR	Transmission Annual Planning Report
TDI	Timely delivery incentive
TNSP	Transmission network service provider

TPIR	Transmission Planning and Investment Review

A INTRODUCING A TIMELY DELIVERY INCENTIVE WILL NOT BE PROGRESSED

The Commission has decided not to progress further work on the development of a timely delivery incentive (TDI) under this Review. The TDI was raised as a potential solution to the issue of TNSPs having an exclusive right but no corresponding obligation to invest in and deliver transmission projects.

Other AEMC reforms recommended under this Review and existing jurisdictional levers address many of the concerns around TNSP incentives to make timely investment decisions and, once the decision is made, to deliver projects on time. These reforms should be given time to mature before determining whether there is a case for further intervention, such as introducing a TDI.

Further, in light of stakeholder feedback that there is a lack of evidence of a problem and that designing a framework to support a TDI would be challenging, the Commission considers the benefits of undertaking further work on a TDI at this point are unlikely to outweigh the costs of doing so.

This appendix provides a brief overview of the problem the TDI was seeking to solve, and the Commission's reasons for ceasing work on the TDI, having regard to stakeholder feedback.

A.1 The TDI was raised as a potential solution to TNSPs having an exclusive right but no obligation to deliver transmission

Under the national regulatory framework, TNSPs have an exclusive right to build, own and operate transmission solutions in the NEM, but no obligation to deliver transmission projects.[97] The consultation paper for the Review identified this feature of the regulatory framework as potentially problematic, creating an environment of risk and uncertainty around the delivery of major transmission projects.

There are currently no alternatives under the national framework if a TNSP decides not to invest and deliver a certain project.[98] A TNSP also faces no regulatory consequences should it delay or not invest in a major transmission project. The implication of this is that there is a risk that major transmission projects that offer net market benefits and are critical for the transition to net zero, may not proceed in a timely way. This risk could manifest where there is misalignment between the long-term interests of consumers and the commercial considerations of investors.[99]

97 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, other than for dedicated connection assets, 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.

98 Note that several jurisdictional mechanisms exist for the provision of transmission infrastructure outside the national framework. These include the Electricity Infrastructure Roadmap in New South Wales, the Victorian Transmission Investment Framework, the Queensland Energy and Jobs Plan and Queensland SuperGrid Infrastructure Blueprint, and recent government announcements regarding joint government ownership and funding for Marinus Link.

99 In the Stage 2 draft report, several examples of this misalignment were provided, including that TNSPs consider that a major

The Commission raised the possibility of introducing a new incentive mechanism as a means of managing the potential risk associated with TNSPs' exclusive right but no obligation to invest in the Stage 3 draft report.[100] The intention of this mechanism – termed the 'timely delivery incentive' – would be to encourage timely investment and delivery of major transmission infrastructure by offering TNSPs financial rewards and/or penalties in a way that better aligns their interests with those of consumers.

A.2 The Commission considers there is currently no case for change

The Commission has decided not to progress work on a timely delivery incentive as a means of encouraging timely and efficient investment and delivery decisions by TNSPs. The Commission's reasons for this decision are outlined below. Stakeholder feedback to the Stage 3 draft report supports our decision.[101]

A.2.1 Other AEMC reforms and existing jurisdictional levers address timely and efficient investment

In submissions to the Stage 3 draft report, several stakeholders referred to the AEMC's Stage 2 final recommendations on financeability and concessional finance as a means of addressing the key financeability challenges potentially impacting timely investment decisions. In addition, several stakeholders noted that the AEMC's Stage 2 final recommendations on social licence and work on the economic assessment process will help with timely delivery of projects. Collectively, the Commission's suite of recommended changes in stages 2 and 3 of this Review would (if made) support TNSPs in managing risks associated with investment in and delivery of major projects.

Stakeholders also cited the existence of jurisdictional powers to direct investment in certain circumstances as an appropriate protection against TNSPs not investing in major transmission projects. We note that both New South Wales and Victoria have state-based powers to direct investment,[102] while state ownership of transmission businesses in Queensland and Tasmania allow for more direct control of the investment decision-making processes.[103]

Several stakeholders also expressed the view that contestability would be a better means of addressing concerns regarding the exclusive right issue than a TDI.[104] As explained in the contestability directions paper, the Commission has placed the contestability workstream of the Review on hold while it continues progressing Stage 2 and 3 reforms via any rule changes received.[105]

project presents more risk than they would be compensated for under the regulatory framework, or where the profile of cash flows is not consistent with investor preferences.

100 AEMC, *Transmission planning and investment review – Stage 3,* draft report, 21 September 2022, pp. 80-91.

101 Of the 25 stakeholders who provided submissions to the Stage 3 draft report, only 17 stakeholders commented on the potential introduction of a TDI. Of those 17, only one stakeholder (Corio Generation) offered tentative support while the remaining 16 stakeholders did not consider it necessary or appropriate to introduce a TDI (AEMO, AER, Australian Energy Council (AEC), AGL, CEC, CEIG, Consumer Reference Group, Energy Australia, ENA, FFI, MLPL, Origin, PIAC, Transgrid, Tilt, TasNetworks).

102 In NSW, the *Electricity Infrastructure Investment Act 2020 (NSW)* (EII Act) gives power to the NSW Minister to direct the delivery of certain transmission projects. In Victoria, the *National Electricity (Victoria) Amendment Act 2020* gives the Minister the power to order the carrying out certain transmission projects.

103 Only in South Australia is there no corresponding arrangements/power to direct.

104 Submissions to Stage 3 draft report: AEC, p. 4; AER, p. 7; AGL, p. 5; CEIG, p. 12; Origin, pp. 1, 3-4; PIAC, p. 9; FFI, p. 5.

A.2.2 There is no evidence to suggest that the regulatory framework causes material delays or non-delivery of projects

In submissions to the Stage 3 draft report, stakeholders were unanimous in their views that there is no evidence to suggest that the 'exclusive right, no obligation' feature of the regulatory framework is resulting in material delays or non-delivery of major transmission projects in the NEM.[106] Stakeholders expressed confidence in the design of the existing incentive-based regulatory framework as an effective means of managing risks around timely investment in and delivery of critical transmission infrastructure by TNSPs.[107]

The Commission considers there is no need to progress further work on a timely delivery incentive in the absence of material evidence to suggest that TNSPs' exclusive right to deliver projects is resulting in delays or non-delivery of major transmission projects.

A.2.3 Designing a framework to support a TDI would be challenging

The Commission notes that the complexity and cost of designing the rules to support a TDI mechanism would likely outweigh any benefit from doing so at this stage.

Stakeholders were unanimous in their views that designing a TDI would be inherently challenging[108] and could have perverse consequences, in that TNSPs could rush to complete projects to avoid any penalties, risking efficient cost, social licence and quality outcomes. Others expressed concern that a TDI may provide strong incentives for TNSPs to push delivery dates out during the ISP joint planning process in order to be in a better position to "beat" the incentive.[109] If a martial issue does arise in the future the Commission considers further work on the design of a TDI could be undertaken then.

105 AEMC, *Transmission planning and investment review- Contestability*, Directions paper, 24 November 2022.

106 Submissions to Stage 3 draft report: AER, p. 5; CEC, p. 3; ENA, p. 10; MLPL, p. 4; TasNetworks, p. 3; Origin, pp. 1, 3; Transgrid, p. 6.

107 Submissions to Stage 3 draft report: AER, p. 5; AGL, p. 5; CEC, p. 3; Energy Australia, pp. 4-5; TasNetworks p. 3, Tilt, p. 4; Consumer Reference Group.

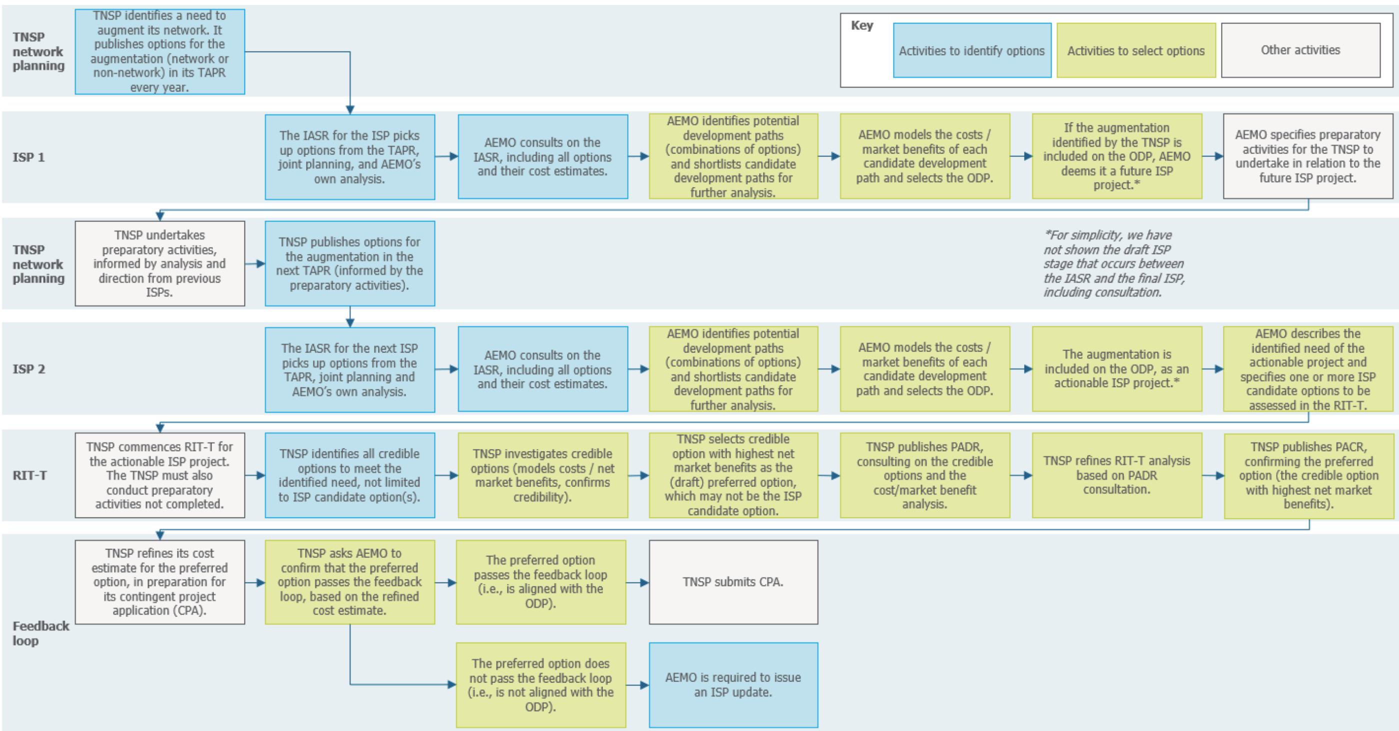
108 Design challenges include: identifying benchmark dates given the inherent uncertainty associated with the optimal timing of ISP/major transmission projects and difficulties determining the quantum of payments or penalties that would be applied and how these payments would flow through to prices. See submissions to Stage 3 draft report: AEMO, pp. 16-17; AER, p. 7; MLPL, p, 4; TasNetworks, p. 3; Transgrid, p. 7.

109 Submissions to Stage 3 draft report: CEC, p. 3; Energy Australia, p. 5; AER, p. 6; ENA, pp. 10-11; Corio Generation, p. 3; AEMO, p. 16.

B CURRENT ECONOMIC ASSESSMENT PROCESS

Figure B.1 below illustrates the existing economic assessment process for ISP projects.

Figure B.1: Current economic assessment process



Source: AEMC