Final decision

Guidelines to make the Integrated System Plan actionable

August 2020

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585165

Email: ISPguidelines@aer.gov.au
AER Reference: 63054

Amendment Record

Version	Date	Pages
1.0	25 August 2020	77

Contents

Executive summary

New guidelines developed

The Australian Energy Regulator (AER) has published guidelines that will shape how the Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) identifies efficient projects in the long term interests of consumers. The guidelines are part of the framework set out in the National Electricity Rules (NER) for making the ISP actionable.

Our guidelines package comprises new cost benefit analysis guidelines that describe the analysis that AEMO must apply in the ISP and that transmission businesses (TNSP) must apply in the regulatory investment test for transmission (RIT–T). It also includes amendments to the forecasting best practice guidelines that set out processes for AEMO to follow in developing the ISP, as well as changes to other instruments and guidelines relating to how transmission businesses must undertake RIT–T applications for non-ISP projects. These guidelines only apply to transmission projects, and apply differently to those projects identified in the ISP compared to those that are not.

This final decision document focuses on the changes that we have made to the guidelines in response to stakeholder feedback on our draft guidelines which we published on 15 May 2020. Most stakeholders were supportive of the draft guidelines, only suggesting incremental improvements. Our rationale for the draft guidelines is set out in the explanatory statement.

Key elements of the guidelines

The guidelines create flexibility for AEMO in how it identifies optimal investments in the ISP, which is important in a changing market environment where there is significant uncertainty and risks do not remain the same from one ISP to the next. At the same time, this flexibility is balanced by transparency so that AEMO's decisions and reasoning are clear and informed by stakeholder engagement. Stakeholder engagement is critical for the ISP.

Many stakeholders stressed the importance of a rigorous cost benefit analysis in testing the need for transmission projects and this is a key part of the guidelines. However, the guidelines also streamline the regulatory process, including by requiring transmission businesses to draw on ISP inputs, modelling and analysis as much as possible in RIT–Ts.

To avoid the ISP and a RIT–T producing different results because of the nature of the analysis undertaken, we have included a mechanism in the guidelines that aligns the ISP and RIT–T analysis. In particular, where AEMO has given special treatment to a risk(s) in the ISP it can direct the transmission business to consider this in a RIT–T through the relevant identified need or the scenarios for the transmission business to test.

Three other specific areas are discussed in detail in the guidelines. First, AEMO should consider staging projects to incorporate option value, and the guidelines describe different mechanisms for how staging could occur. Second, non-network means to address needs on a network are becoming more prevalent, and the guidelines encourage AEMO to consider

these early in the ISP process by engaging with the relevant proponents. Third, the guidelines provide guidance as to how AEMO should test whether projects identified in a RIT-T align with the ISP (the feedback loop), and how AEMO should undertake ISP updates.

AER roles under new ISP framework

Some elements of the new guidelines are binding on AEMO and transmission businesses. The AER is the body responsible for compliance and enforcement of the NER generally and will take a similar approach to compliance and enforcement of the binding elements of the guidelines (as set out in our Compliance and enforcement policy). We will pro-actively monitor compliance and will set up an issues register relating to AEMO and transmission business compliance with the binding elements of the guidelines.

The AER also has other roles in the ISP framework: undertaking reviews of the guidelines; making determinations to settle disputes on the ISP or RIT–T; undertaking transparency reviews at key stages in the ISP process; and assessing proposed expenditure for ISP and non-ISP transmission projects. These roles are complemented by the new ISP consumer panel, which will provide reports assessing AEMO's evidence and reasons supporting its inputs, assumptions and draft ISP, having regard to the long term interest of consumers.

Under the new rules relating to the ISP, we will no longer be reviewing the outcome of RIT–Ts for ISP projects, but we will continue to do so for RIT–Ts for non-ISP projects.

Application of new guidelines

Under the changes to the NER, the new rules and guidelines did not apply to AEMO's 2020 ISP, however they will apply to the 2022 ISP. In terms of specific ISP projects, those that are already well-advanced in a RIT–T will continue to be subject to the old RIT–T application guidelines, rather than these new guidelines. All others will be subject to the new guidelines.

Table 1: Transitional arrangements

Regulatory Process	New ISP rules apply?	Final AER guidelines apply?*
2020 ISP	No – deemed compliant	No
2022 ISP (and all later ISPs)	Yes	Yes
VNI Minor RIT–T	Yes – at election of TNSP	No – RIT–T already finalised
Project EnergyConnect RIT–T	Yes – at election of TNSP	No – RIT–T already finalised
HumeLink RIT–T	Yes – at election of TNSP	No – RIT–T past draft report** stage
MarinusLink RIT–T	Yes – at election of TNSP	No – RIT–T past draft report stage
VNI West RIT–T	Yes – at election of TNSP	Yes
Central West REZ RIT–T	Yes	Yes

Source: AER analysis; AEMO, *2020 ISP*, July 2020; NER. Notes: *See section 4.2; **Project assessment draft report.

1 Introduction

This section introduces the Australian Energy Regulator's (AER's) task (section 1.1) and consultation process (section 1.2). It also sets out the objective and scope of this final decision (section 1.3).

1.1 Our task

The Energy Security Board (ESB) has reformed the National Electricity Rules (NER) and National Electricity Law (NEL) to convert the Integrated System Plan (ISP) into an actionable strategic plan by strengthening the links between it and the transmission planning process. These changes have also been made to streamline the regulatory processes for key projects identified in the ISP whilst retaining a rigorous cost benefit analysis (CBA).

Under the changes to the NER, the AER must develop the following binding guidelines:[1]

- cost benefit analysis guidelines (CBA guidelines), which include changes to the regulatory investment test for transmission (RIT–T) application guidelines for projects identified in the ISP (actionable ISP projects)
- forecasting best practice guidelines (FBPG), which will replace the interim FBPG currently in place for the retailer reliability obligation (RRO).

The changes to the NER have also required us to:[2]

- update our existing RIT–T instrument[3]
- update the RIT–T application guidelines for projects identified outside the ISP process (non-ISP projects).

We are developing these guidelines in line with the NER's *Rules Consultation Procedures*[4] to ensure we follow a meaningful consultation process.

1.2 Guidelines consultation process

We commenced the consultation with publishing an issues paper on 20 November 2019,[5] and then published draft guidelines/regulatory instruments on 15 May 2020.[6]

The final guidelines/regulatory instruments and this final decision are part of the final stage of our consultation process. In these, we have incorporated the following:

1 National Electricity Rules (NER), clause 5.22.5.
2 We do not consider any updates are required for the regulatory investment test for distribution (RIT–D), as well as the RIT–D application guidelines.
3 This is the AER's RIT–T instrument (published in 2010) required by clause 5.16.1(a) before the ISP rules came into effect (and now required by clause 5.15A.1(a)). See section 2.1.2 below.
4 NER, rule 8.9.
5 AER, *Issues Paper: Guidelines to make the ISP actionable*, November 2019.
6 See https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/guidelines-to-make-the-integrated-system-plan-actionable/draft-decision.

- Input we received from stakeholders that attended our webinar on 4 June 2020 and consumer session on 10 June 2020. Questions and answers from the 4 June webinar are on our website.[7]
- Input contained within the 14 written submissions we received to the draft guidelines/ regulatory instruments. Our responses to the issues raised in these submissions is in appendix A.

Table 2 outlines the main project steps for this consultation process.

Table 2: Project timeline

Project step	Date
The COAG Energy Council agreed to the ISP rule change package	20 March 2020
ISP rules made by SA Minister	2 April 2020
Draft AER guidelines to make the ISP actionable published	15 May 2020
Stakeholder webinar on draft AER guidelines	4 June 2020
ISP rules commence	1 July 2020
Submissions close on draft AER guidelines	26 June 2020
AEMO's 2020 ISP published	30 July 2020
Final AER guidelines to make the ISP actionable published	25 August 2020

Source: AER analysis.

1.3 Objective and scope of this final decision

This final decision provides the rationale for our final decisions on the CBA guidelines, FBPG, amendments to the RIT–T instrument and amendments to the RIT–T application guidelines for non-ISP projects. The structure of the final decision is set out in Table 3.

Table 3: Structure of the final decision

Description	Section of final decision
Background on the new transmission planning framework	Section 2
Approach to the final guidelines	Section 3
Application of the final guidelines	Section 4
Changes from the draft guidelines	Section 5

We also provide responses to stakeholder submissions in appendix A, and a glossary of key terms and list of shortened forms in appendix B.

7 See AER, Questions and answers from AER webinar on the draft Integrated System Plan guidelines.

2 Background: Making the ISP actionable

This section sets out key background information to help stakeholders understand and engage with the positions set out in this final decision. This includes:

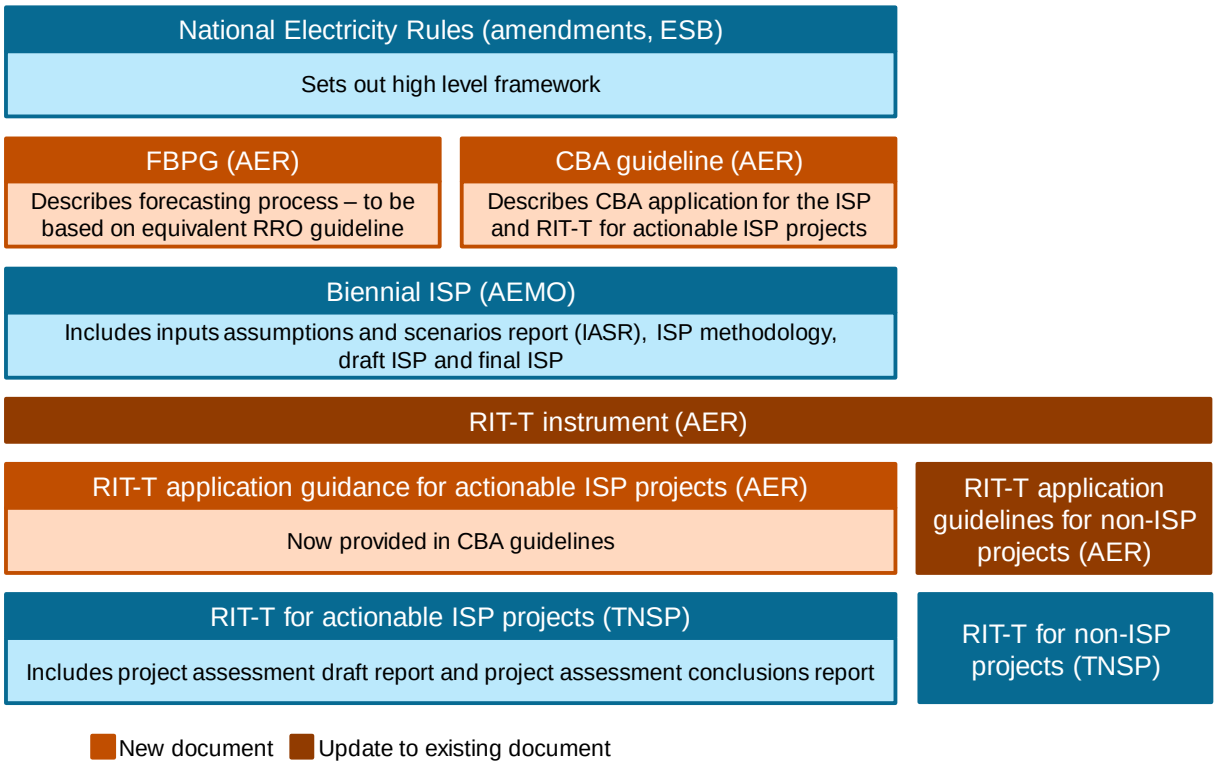
- the new transmission planning framework (section 2.1)
- our role in the new transmission planning framework (section 2.2).

2.1 New transmission planning framework

The rule changes to make the ISP actionable were made by the South Australian Minister under section 90F of the *National Electricity Law* on 2 April 2020, and commenced on 1 July 2020. These set out a new transmission planning framework, which includes our new CBA guidelines and FBPG, and updated RIT–T instrument and application guidelines.

Figure 1 depicts the regulatory governance framework for the transmission planning process under the new framework, for ISP and non-ISP projects. This distinction between ISP and non-ISP projects is important because not all RIT–T applications will flow from actionable ISP projects under the new framework. There will remain RIT–T applications that will be initiated by transmission network service providers (TNSPs) separately, such as RIT–T applications for asset replacement projects. The current transmission planning framework will apply largely unchanged to these projects.

Figure 1: Regulatory governance framework



Source: AER analysis.

2.1.1 What is an ISP?

The Australian Energy Market Operator (AEMO) must publish an ISP every two years by 30 June in accordance with the procedures under rule 5.22 of the NER. The ISP establishes 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 consumers of electricity.[8] The ISP seeks to coordinate investment across the power system. This promotes efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity.

In preparing an ISP, AEMO undertakes a CBA to identify an optimal development path for the power system, chosen from a range of development path options. The optimal development path contains a set of investments that together address power system needs, and must identify:[9]

- Actionable ISP projects—transmission assets or non-network options whose purpose is to address an identified need. These projects trigger RIT–T applications and preparatory activities during the two years of the relevant ISP.
- Future ISP projects—transmission assets or non-network options whose purpose is to address an identified need. These projects do not trigger RIT–T applications but may trigger preparatory activities during the two years of the relevant ISP.
- ISP development opportunities—developments that do not address an identified need, and may include distribution assets, generation, storage projects or demand side developments. These complete the whole-of-system nature of the ISP, and are intended to inform market participants and policy makers.

In preparing an ISP, AEMO must publish an:[10]

- inputs, assumptions and scenarios report (IASR)
- ISP methodology, if AEMO is not using an existing ISP methodology
- draft ISP
- final ISP.

In preparing an ISP, AEMO must also establish and support an ISP consumer panel.[11] The ISP consumer panel must provide written reports to AEMO on the IASR and draft ISP, respectively. These reports will assess AEMO's evidence and reasons supporting the IASR and draft ISP, having regard to the long term interest of consumers.

8 NER, clause 5.22.2.

9 NER, clause 5.22.6(a). Definitions are in NER, clause 5.10.2; NER, chapter 10, and also appendix B.

10 NER, clause 5.22.4.

11 NER, clause 5.22.7 includes provisions on the ISP consumer panel. Information on these provisions is also included under AER, *CBA guidelines*, August 2020, p. 85-6.

2.1.2 What is the RIT–T?

The RIT–T instrument is a binding AER regulatory instrument published (originally in 2010) in accordance with NER clause 5.16.1(a).[12] RIT–T proponents (usually TNSPs) must apply the RIT–T to all proposed transmission investments, except in the circumstances described in NER clause 5.16.3(a).

The AER's RIT–T application guidelines provide guidance on the operation and application of the RIT–T, the process for RIT–T proponents to follow in applying the RIT–T, and how we will address and resolve disputes regarding RIT–T applications.[13]

The RIT–T instrument requires RIT–T proponents to assess the economic efficiency of proposed investment options. Its purpose, as stated in NER clause 5.16.1 is to '… identify the credible option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the market (the preferred option)…' Through this, the RIT–T instrument aims to promote efficient transmission investment in the National Electricity Market (NEM) by promoting greater consistency, transparency, accountability and predictability in transmission investment decision making.

Another key component of the RIT–T process is stakeholder engagement. There is a two- or three-stage process, depending on the type of project being assessed:

- Project specification consultation report (consultation report)—this sets out the detailed identified need for the investment and information about all credible options the TNSP considers could address the identified need. This stage does not occur in applying the RIT–T to actionable ISP projects.
- Project assessment draft report (draft report)—this sets out the CBA for each credible option, proposes a preferred option, and responds to submissions on the consultation report.
- Project assessment conclusions report (conclusions report)—provides a final CBA and preferred option, taking into account submissions on the draft report.

How the RIT–T interacts with TNSP revenue determinations

The RIT–T process does not provide for funding, or regulated revenue, approval. Rather, its intention is for RIT–T proponents (generally TNSPs) to assess the economic efficiency of proposed investment options in consultation with stakeholders.

Regulated revenue for a TNSP is determined solely through our revenue determination process (also known as 'resets'), and is not allocated to specific projects. Rather, our determinations set out the total revenue a TNSP can recover from customers for the provision of particular transmission services over a set 'regulatory control period'. To make this determination, we forecast how much revenue a TNSP needs to cover its efficient costs

12 Current version: AER, *Final: Regulatory investment test for transmission (RIT–T)*, August 2020. Previous version: AER, *Final: Regulatory investment test for transmission (RIT–T)*, June 2010.

13 Current version: AER, *Application guidelines: Regulatory investment test for transmission (RIT–T)*, August 2020.Previous version: AER, *Application guidelines: Regulatory investment test for transmission (RIT–T)*, December 2018.

and provide a commercial return on capital. This requires capital and operating expenditure assessments, including of individual investment projects.

A project that has been through the RIT–T process can form the basis for TNSP revenue in two ways. It can:

- Be incorporated into a TNSP's revenue proposal as proposed capital and/or operating expenditure—we would consider this in making our revenue determination for the upcoming regulatory control period.
- Be incorporated into a TNSP's revenue proposal as a contingent project (if the need and/or timing is uncertain)—the expenditures for such projects do not form part of our assessment of the total forecast capital expenditure we approve in a revenue determination (above). Rather, they can be included later in the total revenue allowance if a number of conditions are met.[14] These conditions are centred around pre-defined conditions (trigger events), and there are different triggers available for actionable ISP and non-ISP projects. We are also required to assess whether the forecast capital expenditure is reasonably likely to reflect prudent and efficient costs. If we are not satisfied this is the case, we are required to determine a substitute forecast.

2.2 AER role in the new transmission planning framework

The AER is responsible for the economic regulation of electricity transmission and distribution services in the NEM,[15] which promotes efficient investment in, and efficient operation and use of, these services for the long term interests of consumers. We are also responsible for monitoring, investigating and enforcing compliance with obligations under the NEL, NER and other respective regulations. As such, our role in the new transmission planning framework includes:

- providing guidance to AEMO and RIT–T proponents (and stakeholders) on the application of the NER through development and application of guidelines
- monitoring compliance with the NER, including with the RIT–T instrument and binding guidelines, and taking enforcement action where necessary and appropriate (we will pro-actively monitor compliance, including by maintaining an issues register relating to AEMO and RIT–T proponents' compliance with the binding elements of the guidelines)
- identifying best practice CBA to promote investment efficiency given our expertise as an economic regulator, consistent with our role in the current RIT–T processes
- conducting a transparency review of AEMO's IASR and draft ISP, focussed on key inputs and assumptions
- making determinations to settle ISP and/or RIT–T disputes
- assessing proposed expenditure associated with actionable ISP projects and non-ISP projects under the revenue determination process.

14 See NER, clause 6A.8.2.

15 And Northern Territory.

The AER's role is part of a suite of arrangements to provide sufficient oversight of the ISP and RIT–T processes within the new framework. The final element of oversight is the new ISP consumer panel, which will comprise of members who have qualifications or experience relevant to the assessment of the ISP, and experience representing consumer interests. The ISP consumer panel will provide reports on the IASR and draft ISP, which AEMO must have regard to in its draft and final ISP, respectively. The CBA guidelines also require AEMO to include the ISP consumer panel and/or other consumer stakeholders in the preliminary review of non-network options.[16]

2.3 Key terms used in this explanatory statement

Appendix B sets out the key terms we use in this final decision, largely related to the ISP and RIT–T processes.

16 AER, *CBA guidelines*, August 2020, p. 44.

3 Approach to the final guidelines

This section sets out our overall approach to the guidelines to make the ISP actionable, including their objective (section 3.1), the key elements / principles we have focussed on (section 3.2), and key themes raised in stakeholder submissions (section 3.3).

3.1 Objective of the guidelines

We have maintained the objective of the guidelines to make the ISP actionable as being to provide certainty, transparency and accountability for AEMO, RIT–T proponents and stakeholders to promote:

- ISPs that identify an optimal development path that optimises the net economic benefit to all those who produce, consume and transport electricity in the market
- RIT–T applications that identify the credible option that maximises the net economic benefit to all those who produce, consume and transport electricity in the market
- effective stakeholder consultation and engagement in the ISP and RIT–T processes.

This objective is drawn from the National Electricity Objective to promote efficient investment in electricity services for the long term interests of consumers. We consider efficient investment is promoted through rigorous CBA that considers NEM-wide impacts and co-optimises across transmission and generation (and other non-network) investment. We also consider efficient investment is promoted through transparency and effective stakeholder consultation and engagement.

3.2 Key elements of the approach to the guidelines

To give effect to the objective of the guidelines identified above, we have maintained the principles in Table 4 in preparing the guidelines to make the ISP actionable.

Table 4: Principles used in developing the guidelines

Principle	Explanation
AEMO flexibility	We support AEMO flexibility in selecting the optimal development path. The current market environment is characterised by a high degree of uncertainty and rapid changes have been observed over relatively short periods. AEMO should have the ability to exercise its professional judgment in developing scenarios of the future, choosing decision making approaches and ultimately selecting ISP projects to progress further to the RIT–T stage or to undertake preparatory activities. Through this flexibility, AEMO may seek to take a prudent approach to uncertainty by planning for key risks that AEMO identifies and tests through consultation with stakeholders. AEMO may choose an optimal development plan to be adaptable to a range of different future scenarios. If the guidelines take an overly prescriptive approach to the analysis in the ISP, we consider it may unduly limit AEMO's ability to choose the optimal mix of ISP projects, undertake continuous improvement or respond to stakeholder feedback.

Transparency and stakeholder engagement	We consider the flexibility for AEMO described above is only appropriate where AEMO is fully transparent about how it has exercised that flexibility and judgment, and appropriately engages with stakeholders throughout the process. Transparency is important because it allows stakeholders to understand and test how AEMO has come to its conclusions in the ISP. Key drivers of ISP decisions, including inputs and assumptions, and AEMO's approach to risk, need to be set out clearly in public documents. Consumers should be able to understand how costs and benefits might vary between development paths, and how AEMO has traded off mitigating risk versus minimising costs. Effective consultation improves the forecasting and decision making process. Given the high fixed costs of transmission investment and uncertainty of the planning environment, promoting transparency and sharing accountability through effective consultation is valuable. For example, market participants may have information that AEMO does not have, which can improve the accuracy of forecasts. To prepare an ISP that is in the long term interests of consumers (who ultimately fund transmission investment), AEMO also needs to understand the preferences of consumers, particularly around reliability and affordability.
Rigorous cost benefit analysis	Stakeholders clearly value having a rigorous CBA as part of the overall transmission planning process, and we support this. The objective of CBA is to promote investment efficiency by considering the relative costs and benefits for different investment options. A CBA undertaken as part of the ISP increases the overall transparency of the ISP. It will highlight the implications of costs and benefits if one development path option is chosen instead of another. This affects consumers, who ultimately pay for transmission investments. As such, rigorous CBA should reduce the risk that consumers will pay for inefficient transmission investment, and is consistent with government requirements for investment proponents to provide business cases where funding is sought. We support aligning the CBA undertaken in the ISP with the CBA undertaken in the RIT–T for ISP projects. This alignment will prevent different outcomes arising between the ISP and RIT–T applications because of an unnecessary difference of approach, rather than new information. We have also sought to achieve as much consistency as possible between how the approach in the RIT–T instrument applies to ISP projects and non-ISP projects.
Streamlined regulatory processes	While we support the need for a rigorous CBA as part of the transmission planning framework, this must be applied in a way that maintains an efficient and streamlined process. The new rules have contributed to this by, among other things, replacing the first stage of the RIT–T process with the ISP, and providing for ISP parameters and modelling to be applied in a RIT–T application where possible. This should reduce duplication of analysis, and therefore the overall time for the regulatory process. We support this approach. A streamlined process should allow for appropriate testing of investment options without unnecessarily drawing out the process through duplication or redundant steps. An inefficient process can lead to delays in progressing investments that may be in the long term interests of consumers, and can lead to consumers bearing higher regulatory process costs (that is, the costs to AEMO and RIT–T proponents of preparing an ISP and applying the RIT–T).

In addition to these principles, we have also maintained our focus on non-network options and option value, to promote flexible investment decision-making and competitive neutrality. We summarise these views in Table 5.

Table 5: Our approach to non-network options and option value

Principle	Explanation
Non-network options	It is important that non-network options are assessed in both the ISP and RIT–T applications on an equal basis to network options. Consideration of both network and non-network options ensures the best investment options are selected by allowing as broad a spectrum of credible options to be considered as possible. This adds credibility to the transmission planning process and promotes competitive neutrality by considering options that contestable markets can provide. While the new rules have created a framework for non-network options to be called for in the draft ISP and fully tested in RIT–T applications, this does not prevent non-network options from being considered earlier in the planning process, including prior to the draft ISP. The earlier non-network options are considered, the more likely they will receive a fulsome assessment.
Option value	Considering option value is an important part of robustly testing investment options, and provides flexibility to respond to changing market conditions. Option value can be captured by assessing options that involve staging projects to respond to new information that arises at a later stage. Appropriate consideration of option value minimises the likelihood of building assets that are ultimately underutilised or stranded, which results in consumers bearing inefficient costs. That is, it mitigates the downside risk while maintaining the upside risk (or benefit) of the investment. It is important for AEMO to consider option value because almost all network investment decisions are partially- or fully-irreversible. Further, AEMO might expect that information will later become available that affects the net economic benefit of partially- or fully-irreversible network investment decisions. In such circumstances, there may be value in retaining some flexibility to respond to that new information when it emerges.

3.3 Stakeholder submissions

This section sets out the key themes raised in stakeholder submissions, and our response to the substantive issues raised. We respond to the key incremental issues in section 5.

3.3.1 Key themes raised in stakeholder submissions

Stakeholders were largely supportive of the draft guidelines to make the ISP actionable:[17]

[17] See Table 7 in appendix A, and Table 8 under 'ISP / RIT–T alignment' in appendix A.

- Most stakeholder submissions supported our overall approach to the draft guidelines, including the objective and principles outlined in Table 4. These stakeholders' feedback focussed on raising specific issues, or suggesting improvements or refinements.
- Most stakeholder submissions supported our approach to flexibility versus prescription in the draft guidelines, including the classification framework. Specifically:
    - ERM Power (ERM) considered that while the draft CBA guidelines provided AEMO with flexibility around how it identifies optimal investments, it supports the AER's proposed approach for a higher level of prescription around key CBA steps to promote transparency and justification. ERM strongly discouraged against the softening of classification decisions in developing the final guidelines.
    - Energy Networks Australia (ENA) and TasNetworks supported the flexibility in our draft CBA guidelines, coupled with increased transparency to ensure outcomes reflect consumer interests.
    - Energy Consumers Australia (ECA) considered we got the balance between prescription and flexibility right in the draft guidelines. However, ECA considered that success will rest heavily on AEMO bringing consumer and other voices into the process in meaningful ways that builds trust and confidence in the ISP.
- Most stakeholder submissions either supported our approach to ISP and RIT–T alignment, or did not raise it as an issue. ENA, TasNetworks and Hydro Tasmania supported our proposed approach to ISP and RIT–T alignment, through allowing AEMO to reflect its approach in selecting the optimal development path by specifying the identified need and scenarios for the RIT–T.
- Snowy Hydro did not support our overall approach to the draft guidelines. It considered they do not adequately support the implementation of the ISP because they seek to embed the existing cost-benefit test in the RIT–T and do not provide RIT–T proponents with the flexibility to adopt AEMO's ISP decision making approach. Snowy Hydro considered this leads to misalignment between the ISP and RIT–T.
- AEMO did not support the level of flexibility we proposed in the draft guidelines. AEMO raised a concern that the draft guidelines introduce analytical limits on its flexibility. For example, by not allowing AEMO to treat discrete market risks such as early closures of plant, or delays in development as potential events against which option values (and risk tolerances) may be assessed. AEMO also raised concerns about our approach to ISP and RIT–T alignment. AEMO recommended delaying the release of the final guidelines.
- AGL also did not support the level of flexibility we proposed in the draft guidelines. However, it considered our approach provides too much flexibility for AEMO in developing the ISP. AGL considered our approach represents an expansion on the flexibility contemplated in the rules, and therefore the draft CBA guidelines has the effect of weakening the certainty and economic rigor otherwise required by the rules. Similarly Origin raised concerns with the level of flexibility provided to AEMO in terms of the ISP CBA, particularly its ability to take risk-averse approaches, which can lead to over-investment. It considered strong transparency measures are therefore crucial.
- Some submissions from consumer groups (EUAA, ECA and PIAC) supported the AER being pro-actively involved in ISP processes to, among other things, give consumers a

forum for raising concerns prior to the dispute process. On the same theme, EUAA supported the idea of an issues register being maintained by the AER.

Appendix A sets out our detailed response to stakeholder submissions.

3.3.2 Our views on prescription, flexibility and alignment

Section 3.3.1 shows that while most submissions supported our guidelines and only raised incremental issues (see section 5), some raised substantive issues on flexibility and its impact on ISP / RIT–T alignment. We respond to these issues here.

Our approach to the guidelines provides AEMO with substantial flexibility in preparing an ISP, particularly in terms of how it considers risk. AEMO has the flexibility to assess the costs and benefits of its development paths under a range of different scenarios of the future, and these scenarios can contain any risks AEMO seeks to mitigate in the ISP. Further, once it assesses the costs and benefits of each development path, AEMO has full flexibility to use any decision making approach to select an optimal development path. This means AEMO can choose which risks to prioritise, and how strongly to mitigate them.

Our approach to the guidelines also ensures the subsequent RIT–T process is aligned with the ISP and streamlined. If AEMO uses a decision making approach in the ISP that prioritises particular risks, it can factor these risks into the identified need for each actionable ISP project. The identified need governs the RIT–T process, as only credible options that address the identified need can be considered in a RIT–T application. Further, AEMO will assign the scenarios to be used for each RIT–T application. If AEMO assigns scenarios that contain the risks it is prioritising, then the RIT–T cost benefit analysis will focus on these risks, effectively giving a zero per cent weight to others. These elements of our guidelines allow the RIT–T application to effectively mimic any decision making approach AEMO uses in an ISP, even though we have retained its risk-neutral framework (which is important for consistency across projects).

To balance this flexibility, our approach to the guidelines focus on transparency and engagement. For the ISP, the guidelines require AEMO to explain and justify its decisions, and be informed by stakeholder input when it develops scenarios and considers how to approach and prioritise risks. For the RIT–T, the guidelines require RIT–T proponents to use their local area and network business knowledge to seek out the best way to deliver the identified need set by AEMO. This may include the use of staging or non-network options not considered in the ISP, which is important for promoting flexibility, innovation and competitive neutrality in a rapidly evolving electricity sector.

4 Application of the final guidelines

This section sets out our key considerations for the application of the guidelines to make the ISP actionable. This includes our approach to compliance and enforcement (section 4.1), transitional arrangements (section 4.2) and reviewing or updating the guidelines in the future (section 4.3).

4.1 Compliance and enforcement of the binding guidelines

This section sets out our approach to compliance and enforcement, including the classification framework we use to specify elements of the CBA guidelines and FBPG that are binding and non-binding. We have maintained the approach from the draft guidelines.

4.1.1 Classification framework for guideline elements

Under clauses 5.22.5(c) and 5.22.5(j) of the NER, we may specify the relevant parts of the CBA guidelines and FBPG that are binding on AEMO and RIT–T proponents. We have done this through the classification framework set out in the CBA guidelines and the FBPG. This sets out our expectations for:

- Requirements that AEMO and/or RIT–T proponents must meet—indicated in the guidelines through the words '*requirement*' or *'is required to'.*
- Considerations that AEMO and/or RIT–T proponents must have regard to—indicated in the guidelines through the words *'consideration'*, *'must have regard to'* or *'must consider'*. In the draft guidelines, we explain that to demonstrate compliance with a consideration, AEMO would need to explain, in writing, how it has had regard to the consideration, including the weight it has given to the consideration in making its decision (if any).
- Discretionary information that is not binding and provided to AEMO and/or RIT–T proponents to provide further explanation or recommend best practice suggestions—this includes any information that is not identified as a requirement or consideration, or is specifically indicated in the guidelines as *'discretionary'.*

We have not changed this framework compared to the draft guidelines. ERM, PIAC and Energy Users Association of Australia (EUAA) supported the classification framework used in the draft FBPG and CBA guidelines.[18] There were no submissions that disagreed with the classification framework.

Also consistent with the draft guidelines, we have generally considered the following in making classification decisions:

- Requirements are highly important to the ISP / RIT–T CBA processes, ISP / RIT–T consultation processes or ISP / RIT–T alignment; and/or are reasonably straightforward for AEMO / RIT–T proponents to comply with.

18 See Table 7 in appendix A, under 'Classification framework'.

- Considerations are also highly important to the ISP / RIT–T CBA processes, ISP / RIT–T consultation processes or ISP / RIT–T alignment. However, they are less straightforward for AEMO / RIT–T proponents to comply with as they may not apply in every instance or may require a level of subjective judgement.
- Discretionary elements are generally best practice recommendations, or information to further explain or demonstrate a binding element. They may also provide information to increase transparency and help stakeholders understand a concept or process.

4.1.2 Approach to compliance and enforcement

We are responsible for monitoring, investigating and enforcing compliance with obligations under the NEL, National Gas Law, National Energy Retail Law and the respective Rules and Regulations.[19] As such, we have an important role in ensuring AEMO and RIT–T proponents comply with provisions set out in the NER and binding elements of the guidelines.

In the CBA guidelines and FBPG, we set out specific compliance reporting requirements. In this final decision we explain how this fits into our overarching approach to compliance and enforcement. In summary, our proposed compliance and enforcement approach:

- is consistent with our compliance and enforcement policy,[20] and seeks to foster a culture of compliance to prevent the need for enforcement action
- is focussed on proactively monitoring compliance
- enables us to investigate potential breaches of the NER and binding guidelines
- enables us to consider whether enforcement action is warranted based on the factors set out in our compliance and enforcement policy.

Our proposed compliance and enforcement approach is largely consistent with our draft guidelines, with minor changes to the compliance reporting to reflect its ex-post nature (as such, the issues register process should feed into the compliance reporting, not vice versa).

PIAC, EUAA and ECA supported an active AER oversight role throughout the ISP process, to promote the robustness of the ISP and to help engender trust in the overall process. EUAA and EnergyAustralia (EA) also supported our proposed approach to compliance and enforcement in the draft guidelines, with the view that it will assist in avoiding disputes. There were no submissions that disagreed with our proposed approach to compliance and enforcement in the draft guidelines.

Further, EUAA stated that it 'looks forward to being able to engage with the AER throughout the ISP process using the issues register and not having to wait for milestones'.[21] We will welcome stakeholder input throughout the ISP and RIT–T processes, and will seek to engage regularly with AEMO throughout the ISP process.

---

19 AER, *Compliance and enforcement policy*, July 2019, p. 2.
20 AER, *Compliance and enforcement policy*, July 2019.
21 See Table 7 in appendix A, under ' AER oversight, including compliance and enforcement'.

Monitoring compliance

Our compliance and enforcement policy sets out the tools we use to monitor compliance. These include stakeholder intelligence, information requests and compulsory notices, market surveillance, business reporting, audits, and targeted compliance reviews and projects.[22]

For the CBA guidelines, FBPG and NER provisions associated with preparing an ISP and applying the RIT–T to actionable ISP projects, we propose to take a proactive approach to monitoring compliance. This is important because once transmission investments have been built they cannot be reversed, and the cost and risk of inefficient transmission investment is fully borne by consumers.

The tools we will use to monitor compliance are:

- **Stakeholder intelligence**—we will assess information we receive from stakeholders, work with stakeholders to better understand their concerns, and use this information to inform any next steps in terms of investigating matters further.
- **Information requests and compulsory notices**—if we need more information to inform our compliance and enforcement activities (for example, in assessing a stakeholder concern), we have the option of using statutory information gathering powers depending on the circumstances.[23]
- **Business reporting**—we require AEMO and RIT–T proponents to report on compliance with the binding elements of the CBA guidelines and FBPG in preparing an ISP and applying the RIT–T to actionable ISP projects.
- **Audits or targeted compliance reviews**—if other monitoring tools raise compliance concerns and we cannot resolve this directly with AEMO or the RIT–T proponent, we may undertake a compliance audit or targeted compliance review. The audit or review may be undertaken by us or external auditors.

We consider compliance reporting will assist us to proactively monitor compliance with the binding guidelines. It will show us how AEMO and/or the RIT–T proponent has complied with each requirement and consideration set out in the binding guidelines. It will also show us how AEMO and/or the RIT–T proponent has resolved key issues raised through the AER issues register process (see below). For clarity, the purpose of the compliance reports is to assist us with monitoring compliance by identifying where in the ISP and RIT–T application documents AEMO and RIT–T proponents demonstrate compliance with the binding elements of the guidelines. They do not intend to duplicate work.

We propose to maintain an issues register on AEMO's and RIT–T proponents' compliance with the binding guidelines in preparing ISPs and applying RIT–Ts for actionable ISP projects, respectively. We propose to:

- Publish this issues register annually on our website, subject to redacting any confidential information.

22 AER, *Compliance and enforcement policy*, July 2019, section 4.

23 See sections 21 and 28 of the National Electricity Law.

- Keep our issues register updated with compliance issues that stakeholders, RIT–T proponents, AEMO, or we have identified. We propose to only include issues that we have undertaken an initial assessment of, relate to a specific binding provision in the CBA guidelines or FBPG, and/or raise a material compliance concern.

The issues register should provide transparency in how we work through and resolve compliance issues and concerns with AEMO and/or RIT–T proponents. It should also encourage regular engagement with AEMO and RIT–T proponents, and complement a proactive approach to compliance monitoring.

Enforcing compliance

Our compliance and enforcement policy sets out the tools we use to enforce compliance of the NER and binding guidelines.[24] The clauses of the NER that require AEMO or RIT–T proponents to comply with the binding CBA guidelines and FBPG are not prescribed as civil penalty provisions. However, for the CBA guidelines and FBPG, our enforcement response may include seeking declarations and orders to comply with the guidelines, or court proceedings to remedy a breach (for example, through an injunction).

Our approach seeks to foster a culture of compliance to prevent the need for enforcement action. However, if our investigation suggests a breach has occurred, we will look at a range of factors to decide whether we should take enforcement action, and if so, what action we should take. When doing so, we will assess the harm caused or benefit derived, the nature and extent of the conduct and how deliberate the conduct was.[25]

4.2 Transitional arrangements for the guidelines

This section sets out our approach to how the guidelines will apply to in-flight and future ISP and RIT–T processes. Our approach has not changed from the draft guidelines.

EUAA understood and TasNetworks supported these transitional arrangements. Snowy Hydro did not support these transitional arrangements, and we have responded to its concerns in Appendix A.[26]

ENA sought guidance on how the transitional arrangements in the ESB's ISP rules framework relate to the transitional arrangements for the guidelines. These transitional arrangements operate separately. The fact that the guidelines may not apply to an existing RIT–T application for a project does not affect how rule 11.126 of the NER applies to that project, and in particular, whether that project is able to access the contingent project triggers in clause 5.16A.5 of the NER.

24 AER, *Compliance and enforcement policy*, July 2019, section 5.
25 AER, *Compliance and enforcement policy*, July 2019, pp. 4, 8.
26 See Table 7 in appendix A, under 'Transitional arrangements'.

4.2.1 ISP

The guidelines (in particular, the CBA guidelines and FBPG) apply to the 2022 ISP, including the IASR. The guidelines do not apply to the 2020 ISP, but may apply to RIT–Ts for projects identified in the 2020 ISP.

4.2.2 RIT–T processes for actionable ISP projects

The guidelines (in particular, the CBA guidelines and updated RIT–T instrument) apply to all RIT–T processes for actionable ISP projects that commence after their publication. For these transitional considerations, we take 'commenced' to mean publication of a draft report.[27]

For RIT–T processes that are underway when the guidelines are published, we consider:

- It is not appropriate for the guidelines to apply to RIT–T applications where a draft report has been published. Such RIT–T applications are substantively underway and may require re-starting the draft report. For these RIT-T applications, the previous RIT–T instrument and application guidelines continue to apply.
- It is appropriate for the final guidelines to apply to RIT–T applications where only a consultation report[28] has been published. In this case, the RIT–T proponent can progress to the draft report without having to re-start any reports.

Table 6 provides further guidance on the transitional application of the guidelines to RIT–T applications for actionable ISP projects.

Table 6: Transitional arrangements

Regulatory Process	New ISP rules apply?	Final AER guidelines apply?
VNI Minor RIT–T	Yes – at election of TNSP	No – RIT–T already finalised
Project EnergyConnect RIT–T	Yes – at election of TNSP	No – RIT–T already finalised
HumeLink RIT–T	Yes – at election of TNSP	No – RIT–T past draft report stage*
MarinusLink RIT–T	Yes – at election of TNSP	No – RIT–T past draft report stage
VNI West RIT–T	Yes – at election of TNSP	Yes
Central West REZ RIT–T	Yes	Yes

Source: AER analysis; AEMO, *2020 ISP*, July 2020; NER, Chapter 11. Notes: *Project assessment draft report.

27 That is, a project assessment draft report.
28 That is, a project specification consultation report.

4.2.3 RIT–T processes for non-ISP projects

The updated RIT–T instrument and RIT–T application guidelines apply to all RIT–T processes for non-ISP projects that commence after their publication. For these transitional considerations, we take 'commenced' to mean publication of a consultation report.[29]

This means the updated RIT–T instrument and RIT–T application guidelines do not apply to RIT–T applications where a consultation report has been published. We consider this is appropriate because the new framework still requires a consultation report for RIT–T applications for non-ISP projects, so may require re-starting the consultation report. As such, the previous RIT–T instrument and application guidelines continue to apply.

4.3 Reviewing and updating the guidelines

We have introduced some principles to guide our approach to reviewing and updating the guidelines to make the ISP actionable. This is in response to PIAC's recommendation that we periodically review our classification of elements, rationale and assessment approaches so the ISP and the guidelines can remain effective in the longer term.[30]

We consider decisions to review or update the guidelines should be guided by a set of principles considered in combination. We consider the following principles appropriate:

- Changes to the transmission planning framework in the NER—if there are significant changes to the NER that affect material in the guidelines, we would expect the guidelines to be updated accordingly. However, it may not warrant a broader review.
- Identification of significant issues—if stakeholders, AEMO or RIT–T proponents raise significant issues with the application of the guidelines, we would consider these issues and decide whether an update to or review of the guidelines is warranted. Similarly, we may identify issues with the application of the guidelines ourselves.
- Changes in the market and/or policy environment—if there are significant changes in the market and/or policy environment that affect the guidelines, we may review the guidelines to consider whether they remain fit for purpose. For example, if the need for significant transmission augmentation through the ISP reduced materially in the future, there may be value in reviewing the guidelines to streamline the ISP processes.
- Length of time—if a long time period elapses without a review of the guidelines, there may be value in conducting a review to ensure they remain fit for purpose and effective. Similarly, if we have only recently made or updated the guidelines we are less likely to seek to review them.

29 That is, a project specification consultation report.

30 See Table 7 in appendix A, under 'Classification framework'.

5 Changes from the draft guidelines

This section sets out our rationale for the key changes made to the draft guidelines in developing the final guidelines to make the ISP actionable. Because stakeholders largely supported our overall approach to the draft guidelines, and the level of flexibility versus prescription, the changes we have made are incremental and technical in nature.

Our rationale for the guideline elements that have not changed from the draft decision is set out in the explanatory statement for the draft guidelines to make the ISP actionable. That document is complementary to this final decision document.

This section covers:

- CBA guidelines (ISP component) (section 5.1)
- changes to the RIT–T instrument and guidance for all RIT–T projects (section 5.2)
- changes to the RIT–T instrument and guidance for actionable ISP projects (section 5.3)
- changes to the RIT–T instrument and guidance for non-ISP projects (section 5.4)
- FBPG (section 5.5).

5.1 CBA guidelines (ISP component)

The CBA guidelines require AEMO to conduct a CBA in preparing an ISP. Specifically, under clause 5.22.6(a)(4), an ISP must identify the optimal development path, which must be based on a quantitative assessment of the costs and benefits of various options across a range of scenarios, in accordance with CBA guidelines. The CBA guidelines also contain RIT–T application guidelines for actionable ISP projects, which we discuss in section 5.3.

The CBA guidelines provide guidance for AEMO on:

- developing inputs, assumptions and scenarios
- conducting a CBA according to best-practice CBA methodology
- more detailed aspects of CBA (externalities, option value and non-network options)
- how the ISP interacts and aligns with RIT–Ts for actionable ISP projects.

We have made incremental changes to the draft CBA guidelines. This reflects stakeholder submissions and feedback on the draft CBA guidelines, which were broadly supportive, and raised specific issues, improvements or refinements.[31] In response to submissions, we have made the following key incremental improvements to the draft CBA guidelines:

- **Projects that can vary across scenarios**: In response to AEMO's submission, the CBA guidelines now clarify that some projects can vary across scenarios (in the section on selecting development paths). We agree with AEMO that the ISP should be flexible to

31 See Table 7 and Table 8 in appendix A.

respond to how the future develops.[32] Our CBA guidelines provide for this by allowing AEMO flexibility to choose which projects to include in its development paths and hold fixed across scenarios (for example, projects that may become actionable ISP projects), and which projects to include in its market development modelling (as modelled projects in 'states of the world' under each scenario). The latter projects will vary across scenarios, and could include projects that may become future ISP projects. As such, our CBA guidelines do not prevent AEMO from presenting a 'dynamic' optimal development path, where actionable ISP projects are fixed but future ISP projects vary across scenarios. In addition, the biennial nature of the ISP allows AEMO to respond dynamically as the future unfolds. At each ISP, the CBA is repeated to determine the next set of actionable ISP projects. It may be that some of the future ISP projects identified in the previous ISP become actionable ISP projects, while others drop off.

- **Valuing costs**: We have made two changes to the section on valuing costs in the draft CBA guidelines. We have extended the requirement for AEMO to check its cost estimates against recent contingent project applications, to include recent tender outcomes governing transmission network augmentations and/or final project outcomes (including variations). We agree with ENA that this is important in the context of Victorian transmission planning arrangements, under which AEMO conducts the RIT–T and then competitively tenders the preferred option for the project.[33] We have also extended the requirement for AEMO to present key cost items in each class of costs, to include the estimated capital cost of each ISP project in each development path (and its source(s)). We consider this is important for transparency, and capital costs were a focus in MEU's submission and EUAA's feedback.[34] This also assists with ENA's submission on AEMO–TNSP engagement,[35] as we expect the requirement to provide a source(s) will facilitate engagement between AEMO and the relevant TNSPs in valuing costs.
- **Cross check examples**: We have added to the discretionary example cross checks in the draft CBA guidelines, under the section on selecting an optimal development path. We have incorporated one of the examples recommended by EA.[36] We consider this valuable in providing a range of options for AEMO to consider, noting it has full flexibility to decide which cross checks (if any) to apply.
- **Distributional effects**: Given the number of stakeholders who supported the requirement to present distributional effects in the draft CBA guidelines (under the section on selecting an optimal development path), we have added to our discretionary guidance on distributional effects to provide more specific recommendations and examples, including Spark Infrastructure's recommendation of customer bill impact estimates.[37] We consider this also assists with PIAC and MEU's concerns around risk and cost allocation.[38] Information on key distributional effects can be useful for policy makers in considering policies around risk and cost allocation.

32 See Table 8 in appendix A under 'Development paths'.
33 See Table 8 in appendix A under 'Valuing costs'.
34 See Table 8 in appendix A under 'Valuing costs' and 'Sensitivity testing'.
35 See Table 8 in appendix A under 'Valuing costs'.
36 See Table 8 in appendix A under 'Cross checks'.
37 See Table 8 in appendix A under 'Distributional effects'.
38 See Table 8 in appendix A under 'Cost and risk allocation'.

- **Project funding**: In response to ENA's submission,[39] we have amended the draft requirement for AEMO to be certain project funding contributions from parties outside the market are committed before changing the calculation of costs or market benefits in the ISP (in the section on treatment of externalities). We recognise it can be difficult to balance the timing of the ISP with the timing of external processes for funding commitment. As such, the CBA guidelines now allow AEMO to consider these funds when it expects them to become committed. However, if AEMO anticipates a funding commitment that does not occur, the CBA guidelines require AEMO to consider whether a subsequent ISP update is required. This is important for maintaining the integrity of the CBA—if external funds are withdrawn and the ISP CBA does not account for this, the project will appear less costly than it actually is.
- **Preliminary review of non-network option proposals**: We have amended the draft requirement for AEMO to conduct a risk assessment where it rejects a non-network option proposal under NER clauses 5.22.12(c)-(e) because of risk or uncertainty. While we do not consider this requirement is too onerous for AEMO (as suggested by ENA),[40] we have removed some of the specificity to provide AEMO with more discretion in how it conducts the assessment. We consider a high level risk assessment is important to retain where AEMO considers the risk of a non-network option proposal is too great. We expect AEMO would do some form of risk assessment in making a risk-based conclusion, and this provides the non-network proponent with relevant information it can use in improving its proposed solution. We also consider that both non-network and network options carry operational risk, which means the risk assessment of non-network options should not be made in isolation.[41]
- **Worked example on the identified need**: We have extended the worked example on describing the identified need in the draft CBA guidelines. This is in response to MEU's submission that the identified need may not be specific enough for non-network proponents to provide credible non-network options for actionable ISP projects.[42] While we acknowledge MEU's views and recognise the importance of non-network options, we do not consider it appropriate to require AEMO to provide specific capacities in describing the identified need for actionable ISP projects. This is because our guidance in this area is principles-based. It also seeks to strike a balance between an identified need that is general enough to avoid bias towards a particular solution, but specific enough to be consistent with the optimal development path (and useful to proponents of alternative credible options). However, we considered we could assist with MEU's concerns by providing a worked example that covers the key nuances around describing the identified need in a meaningful and useful way.
- **Feedback loop**: We have refined the draft guidance on the feedback loop to increase clarity and reduce duplication. The ENA raised some concerns on our draft guidance for

39 See Table 8 in appendix A under 'Funding contributions'.

40 See Table 8 in appendix A under 'Non-network options'.

41 For example, the Heywood interconnector upgrade project in 2013 was expected to increase its nominal transfer capability from 460 MW to 650 MW (see ElectraNet, *Heywood interconnector upgrade contingent project application*, December 2013, p. 6). However, we understand AEMO has not (to date) approved the upgraded interconnector to operate above 600 MW (see AEMO, *Interconnector capabilities for the National Electricity Market*, November 2017, pp. 6-7).

42 See Table 8 in appendix A under 'Identified need'.

the feedback loop.[43] We consider this is a result of misunderstanding elements related to materiality that did not have sufficient clarity. As such, we have consolidated and clarified the materiality considerations in the draft guidelines to reflect its intention—that is, to allow for the intensity of the re-modelling to be scaled based on the difference in costs and/or market benefits between the RIT–T preferred option and the ISP candidate option. We have also added a requirement for AEMO's written confirmation in terms of the cost of the actionable ISP project. This is related to staged projects for option value (see section 5.3 under 'Staged projects and worked examples'). The requirement seeks to ensure that while the feedback loop is conducted for the actionable ISP project, the cost 'cap' for the purpose of clause 5.16A.5(d) of the NER matches the stage of the actionable ISP project in the contingent project application.

- **Project names**: In response to ECA's submission,[44] we have provided discretionary guidance to encourage consistent project naming between the ISP and RIT–T. This is contained in a new section of the CBA guidelines called 'Actionable ISP project names'.
- **Terminal value**: We have made minor adjustments to the draft guidance on valuing costs and market benefits, to be consistent with our RIT–T guidance on terminal values (see section 5.2 below under 'Terminal value').

For a detailed discussion of stakeholder submissions and the full set of our incremental improvements, see Table 8 in appendix A.

5.1.1 Other issues raised

There were other issues and suggestions raised by stakeholders that we did not incorporate into the CBA guidelines, including:

- **Assigning new scenarios to RIT–T proponents**: AEMO disagreed with the draft requirement to restrict the scenarios assigned to RIT–T proponents to those in the IASR.[45] We have maintained this requirement because we consider scenarios are a key component of the ISP CBA, and as such are developed through the robust IASR consultation process set out in the NER. Selecting an optimal development path based on different scenarios potentially undermines the IASR process, and does not provide stakeholders with the same opportunity to engage and provide feedback. If new information arises after the IASR that affects scenario inputs and assumptions, the FBPG provides a process for these to be updated.[46]
- **Considering discrete risks in the ISP**: AEMO considered our draft CBA guidelines require AEMO to model discrete risks as separate scenarios, resulting in a plethora of scenarios that undermines the value of the scenario analysis.[47] We have not changed the CBA guidelines in this area. We consider the draft and final CBA guidelines do not require AEMO to model discrete risks as separate scenarios. However, they do require AEMO to consider:

43 See Table 8 in appendix A under 'Feedback loop'.
44 See Table 8 in appendix A under 'Project names'.
45 See Table 8 in appendix A under 'ISP / RIT–T alignment'.
46 AER, *FBPG*, August 2020, p. 8.
47 See Table 8 in appendix A under 'Scenarios' and 'Sensitivity testing'.

- Major sectoral uncertainties (which can include discrete risks) in developing a range of future scenarios. This is important to achieving the purpose of scenario analysis (that is, to assess and manage uncertainty about how the future will develop and affect investment needs across the NEM).
- Using internally consistent inputs for each scenario, such that each scenario represents a plausible market environment. We do not consider discrete risks occur in a vacuum—they affect other input variables in a scenario. This is one reason why scenarios are a useful way of assessing how key risks can impact future market conditions, and consequently, the costs and market benefits of different development paths.

Further, our draft and final CBA guidelines provide full flexibility to AEMO in how it conducts sensitivity analysis on its optimal development path. This includes which sensitivities it chooses to test. For example, AEMO could test how the costs and benefits of its optimal development path change if coal fired power generation were to retire earlier in a slow growth scenario. However, we consider it important for AEMO to be consistent and transparent with its analysis, and be informed by feedback from stakeholders. These principles apply to scenarios and sensitivities. However, we note that, unlike scenarios, AEMO may identify new sensitivities after the draft ISP where this is needed to test its outcomes to identify key inputs and assumptions for transparency purposes.

- **CBA test and benefits assessed**: Some stakeholders advocated for the ISP CBA to consider consumer benefits only, or to consider broader social or economy-wide benefits.[48] The NER and our CBA guidelines require the ISP and RIT–T processes to use a market-wide CBA.[49] This considers the costs and benefits of an investment project not just to the asset owner, but across the market as a whole. As such, it aggregates the costs and benefits across 'all those who produce, consume and transport electricity in the market'. This is important in promoting efficient investment in electricity services because the electricity market operates across a meshed network. As such, investment in network or generation (or other non-network) assets have 'network effects' that affect other participants in the market. In terms of broader benefits, if policy makers consider there are broader social or economy-wide benefits to an ISP project(s) in a development path, they can provide funding contributions consistent with those benefits in the market-wide CBA. This increases the net economic benefits of that ISP project(s)—effectively allowing non-NEM benefits to be captured in the analysis whilst ensuring electricity customers only pay for efficient expenditure associated with their electricity supply.
- **Wealth transfers**: Under a market-wide CBA, any cost to one market participant that directly translates into an equal benefit for another market participant is classified as a wealth transfer and should be netted out to zero in the CBA. This is why the CBA guidelines do not allow for market participant funding contributions to ISP projects to

48 See Table 7 in appendix A under 'Approach / objective' and Table 8 in appendix A under 'CBA methodology'.

49 NER, clause 5.15A.1(c) for the RIT–T, and market benefit classes specified in NER, clause 5.15A.2(b)(4). NER 5.22.10(c) then applies the same market benefit classes for the ISP, and NER, clause 5.15A.3(b)(4) aligns the RIT–T for actionable ISP projects to the ISP.

reduce the costs (or increase the market benefits) of that ISP project, even though this was recommended in ENA's submission.[50] Our views are as follows:

- For example, say a transmission network ISP project costs $100 million dollars for a TNSP to build, and a generator contributes $40 million towards the project. In the CBA, the cost of the project remains $100 million. There is a saving at the transmission level of $40 million (because the TNSP pays $40 million less for the project, which would result in lower transmission charges given the AER would factor the cost reduction in a part of its contingent project determination). However, there is also a corresponding cost at the generation level (because the generator has provided a $40 million payment). The net market effect is zero. In terms of benefits, the funding contribution does not change the nature or capacity of the project, so it does not change the market benefits it delivers.
- While generator contributions to ISP projects do not change the aggregate costs and benefits across the market, they do change the distribution of those costs and benefits. As such, AEMO could consider market participant funding contributions in presenting information on key distributional effects.
- We also disagree with ENA's view that this approach 'will tilt the playing field towards non-network provision of these services (where only the contract costs will be included in the ISP and RIT–T cost estimates) and away from network provision (where the AER's guidance means that the whole cost must be included).[51] Regardless of who in the market provides the project, a market-wide CBA would capture the whole cost and market-wide benefits of the project (with any contract costs or payments between market participants netted off). For example, if a credible option required a grid-scale battery that cost $700,000, the net benefit would be reduced by this amount, regardless of whether a TNSP or market participant purchased the battery. If that battery provided $800,000 of market benefits, this would increase the net benefit by this amount. This is regardless of whether the TNSP has a network support contract with a market participant that owns the battery, or whether a market participant pays the TNSP for the rights to operate the battery that the TNSP owns.

- **Incremental net economic benefits**: In its submission, MEU raised concerns around ensuring each project in a development path provides a positive contribution to the net economic benefit of the development path as a whole (that is, has a positive incremental net economic benefit, not duplicated by another ISP project in the development path).[52] We consider the ISP performs its CBA at a development path, not individual project, level. However, we consider it is very important that:
  - The ISP co-optimises across a range of different transmission, generation and other non-network options in developing a whole-of-system plan. As such, our CBA guidelines require AEMO to consider as many different investment options as possible in running its co-optimisation process to select development paths.

50 See Table 8 in appendix A under 'Funding contributions'.
51 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, section 2.3.
52 See Table 8 in appendix A under 'Incremental net economic benefits of ISP projects'.

- Market benefits are not double counted across ISP projects within a development path. As such, our CBA guidelines require AEMO to not double count any costs or market benefits across ISP projects in a development path.
- Each ISP project within the optimal development path makes a positive contribution to the net economic benefit of the development path (under AEMO's decision making approach). This means that adding the project to the development path increases the net economic benefit of the overall development path. Otherwise, adding the project to the development path would decrease the net economic benefit of the overall development path. Our CBA guidelines provide an example cross check on this that AEMO could use. In any case, an actionable ISP project that failed this check would be unable to satisfy the RIT–T, because the additional market benefits the project contributes to the optimal development path would not outweigh its cost.

For a detailed discussion of stakeholder submissions and the full set of our responses to issues raised, see Table 8 in appendix A.

5.2 Changes to the RIT–T instrument and guidance for all RIT–T projects

We have made several incremental updates to areas of the draft RIT–T instrument, RIT–T application guidelines and CBA guidelines that apply to both actionable ISP projects and to RIT–T projects that are not actionable ISP projects ('non-ISP projects'). These updates include:

- **ISP inputs and assumptions**: The draft CBA guidelines and RIT–T application guidelines restricted the 'demonstrable reasons' allowed for departing from ISP parameters to only include material changes in circumstances. We have updated this restriction to better rest on AEMO's intent by limiting demonstrable reasons to where 'there has been a material change that AEMO would, but is yet to reflect in, a subsequent IASR, ISP or ISP update'.[53] This amendment reflects EnergyAustralia's suggestion to align these reasons with AEMO's intent or an expectation that the next ISP would reflect the updated input or assumption.[54] We agree that requiring RIT–T applications to reflect the ISP's intent is important for achieving alignment. Given this, we have also added that 'where a material change is not a change in circumstances or facts (for example, a change in the RIT–T proponent's understanding or assessment of the facts, rather than a change in the facts themselves), the RIT–T proponent might choose to attain written confirmation of the change from AEMO'.[55]
- **Terminal value**: ENA's submission raised a concern that the draft CBA guidelines introduced a new requirement for RIT–T applications relating to actionable ISP projects. This requirement is to incorporate operating and maintenance costs into terminal values where the modelling period is shorter than the asset life.[56] Our intention in the draft CBA

53 AER, *Application guidelines: RIT–T*, August 2020, p. 25; AER, *CBA guidelines*, August 2020, p. 25.
54 EnergyAustralia, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 1-2.
55 AER, *Application guidelines: RIT–T*, August 2020, p. 25, AER, *CBA guidelines*, August 2020, p. 59.
56 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 18.

guidelines was not to introduce a requirement, but to provide further explanation around an existing RIT–T requirement for the RIT–T proponent to quantify 'operating maintenance costs in respect of the operating life of the credible option'.[57]Given there was a lack of clarity around this aspect of the RIT–T instrument, which applies to both actionable ISP projects and non-ISP projects, we have provided additional clarification in the final CBA guidelines and RIT–T application guidelines. Specifically, we have now:

- Added that when calculating terminal values, the RIT–T proponent is required to (or 'would') include operating and maintenance costs '(if any)'.[58] The addition of 'if any' recognises that if all the operating and maintenance costs of a credible option are expected to occur before the end of the modelling period, none of these costs would be incorporated in the terminal value.
- Explained that the terminal value represents the credible option's expected costs and benefits over the remaining years of its economic life after the modelling period.[59] We have added this explanation given there appears to be a lack of clarity over the role of terminal values.
- Required (or advised that it is best practice for) the RIT–T proponent to explain and justify the assumptions underpinning its approach to calculating terminal value.[60] Terminal value calculations generally need to use strong assumptions, which should be justifiable. The lack of clarity around terminal values has highlighted a particular need for RIT–T proponents to be transparent in this area.

5.3 Changes to the RIT–T instrument and guidance for actionable ISP projects

We have made several incremental updates to areas of the draft RIT–T instrument and CBA guidelines that relate to actionable ISP projects. These updates include:

- **Staged projects and worked examples**: Submissions from Snowy Hydro, ENA and TasNetworks indicated that there was a lack of clarity around how project staging would operate under the actionable ISP framework.[61] To provide greater clarity, we have introduced a new section on 'staged projects under the ISP framework'. We have also incorporated suggestions from ENA and TasNetworks to introduce new worked examples.[62] In particular, we have added examples to demonstrate how staged projects would progress through the actionable ISP framework. These include an example

57 AER, *Final: RIT–T*, August 2020, para (5)(b). This first version of the RIT–T instrument also included this requirement. See AER, *Final: RIT–T*, June 2010, para (2)(b).

58 The RIT–T application guidelines is not binding and therefore does not frame this as a 'requirement'. See AER, *Application guidelines: RIT–T*, August 2020, p. 27.

59 AER, *Application guidelines, RIT–T*, August 2020, p. 58; AER, *CBA guidelines*, August 2020, p. 67.

60 Specifically, this is a binding requirement in the CBA guidelines, but best practice guidance in the RIT–T application guidelines (which is not binding). AER, *Application guidelines: RIT–T*, August 2020, p. 58; AER, *CBA guidelines*, August 2020, p. 68.

61 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 12-15; Snowy Hydro, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 4; TasNetworks, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.

62 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 12-15, TasNetworks, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.

involving an 'early works' stage, around which TasNetworks requested clarity. These examples are modified versions of worked examples that ENA proposed (see section 5.3.1 for further explanation).

    - In addition to staging projects for option value, staging can also occur in where each stage is expected to occur (as such, there are no decision rules). In this case, the RIT–T preferred option is a "unified" project, but the project is brought through the feedback loop and contingent project application in stages. There are some interactions between the RIT–T, feedback loop and contingent project application for projects staged in this way. We intend to issue guidance material on this kind of staging in the future, to complement these guidelines.

- **Sensitivity testing**: ENA's submission raised concerns around the relevance of sensitivity testing that the draft CBA guidelines would require.[63] Similar to the draft, the final CBA guidelines have not included binding requirements on RIT–T proponents to conduct sensitivity testing, but rather have made this a binding consideration. Nevertheless, given we only intend for RIT–T proponents to conduct sensitivity analysis where proportionate and relevant, we have now clearly specified this in the final CBA guidelines.[64]
- **Presenting data**: The draft CBA guidelines included high-level principles-based guidance on consumer and non-network engagement. One of these principles entailed requiring RIT–T proponents to provide transparent, user-friendly data to stakeholders. In the final CBA guidelines, we have added a consideration for RIT–T proponents to have regard to when applying this requirement. Specifically, we have added that, in providing data, the RIT–T proponent must have regard to how it can present information in line with stakeholder preferences. This additional consideration recognises that there may be circumstances where stakeholders strongly value seeing information in particular ways. For instance, EnergyAustralia considered there would be value in requiring RIT–T proponents to outline distributional effects.[65] Rather than introducing a specific requirement, we have introduced a broader consideration. Our broader approach recognises that stakeholders may have different preferences—for example, distributional effects may not always be relevant, or stakeholders might prefer to see price effects. Our approach to make this a consideration recognises that, while RIT–T proponents should consider how they could present information in line with stakeholder preferences, there may be valid reasons to present information differently.

5.3.1 Additional worked examples

We have incorporated ENA's suggestion to provide greater clarity and worked examples around how staged actionable ISP projects would operate and interact with AEMO's feedback loop and the AER's contingent project process. ENA requested further clarity given this is a new area of the ISP framework that was not subject to material consultation when

63 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 3, 11.
64 AER, *Application guidelines: RIT–T*, August 2020, p. 67.
65 EnergyAustralia, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.

the ESB developed the actionable ISP rules.[66] When developing new worked examples, we considered the worked examples that ENA put before us. These included:

1. an example relating to a single actionable ISP project (with no staging) that led to a single RIT–T application that identified a preferred option with two stages
2. an example relating to a staged ISP project where the ISP required the RIT–T proponent to apply the RIT–T to the first stage.

Rather than directly including ENA's first worked example, we have extended example 10 from the draft CBA guidelines. Similar to ENA's suggestion, the example from our draft CBA guidelines illustrated how a RIT–T proponent could develop a staged project to address a need identified in the ISP.[67] However, unlike ENA's suggestion, this example did not illustrate how such a project would progress through the actionable ISP framework after the RIT–T proponent identified it as the preferred option. The final CBA guidelines now include example 16, which illustrates how the project in example 10 would progress through the feedback loop and contingent project process.[68] Example 16 also explains the circumstances in which the next stage of the project would form part of the optimal development path in a subsequent ISP. While ENA's example assumed the next stage would be included in the next optimal development path, we have provided some additional explanation around this given there may be circumstances where an additional RIT–T application would be required. Specifically, we have explained that an additional RIT–T application would not be required where the economic outcomes align with the contingencies/decision rule contemplated in the previous RIT–T application.

Example 16 in the final CBA guidelines also includes a worked example based on ENA's second example. Our example is very similar to ENA's suggestion, except that AEMO directs the RIT–T proponent to explore three (rather than one) ISP scenarios. We have made this example as a multiple scenario RIT–T application because we expect that multiple scenarios would be relevant when option value is driving the market benefits of addressing the identified need.

5.4 Changes to the RIT–T instrument and guidance for non-ISP projects

We have made a couple of changes between the draft and final RIT–T instrument and application guidelines that specifically apply to non-ISP projects. For instance:

- **Use of ISP scenarios**: The draft RIT–T instrument required these RIT–T proponents to adopt ISP scenarios from the most recent IASR unless they could provide demonstrable reasons for why adding, omitting or varying these scenarios was necessary. We have now amended this requirement so it only applies to ISP scenarios that are relevant to the RIT–T application. The RIT–T instrument also now requires that where no ISP scenarios are relevant, the RIT–T proponent must form scenarios consistently with the

66 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 3, 12.
67 AER, *Draft CBA guidelines*, 15 May 2020, pp. 54-55.
68 AER, *CBA guidelines*, August 2020, example 12, pp. 69-70.

requirements for reasonable scenarios in the RIT–T instrument.[69] The RIT–T application guidelines also provide some guidance around where ISP scenarios will likely be relevant. These now state that, in general, ISP scenarios are likely to be relevant where wholesale market outcomes are a material driver of market benefits, and undertaking market modelling is therefore appropriate.[70] These updates reflect ENA's and TasNetworks' submissions, which noted that ISP scenarios will not be relevant for many non-ISP projects, which could include minor replacement projects that do not affect wholesale market outcomes.[71] While our draft guidelines did not require non-ISP projects to use ISP scenarios, they did establish a burden of proof around departing from ISP scenarios as a default option. We consider the new wording (along with maintaining the requirement to use ISP inputs and assumptions) better realises our intention of requiring RIT–T proponents to turn their minds to this information without creating a disproportionate regulatory burden.

- **Forming new scenarios**: The RIT–T application guidelines now clarify that, when forming reasonable scenarios, RIT–T proponents should only be conscious of current NEM developments 'where relevant'.[72] The added 'where relevant' is for avoidance of doubt and is consistent with the intent of the original drafting. We have added this clarity given ENA raised concerns that this guidance could be interpreted as requiring TNSPs to take into account factors that have no relevance to the RIT–T outcome.[73]
- **Market modelling**: When stating what market modelling non-ISP projects should use, the RIT–T instrument now clarifies that this requirement only applies 'when undertaking market modelling'.[74] We added this text because the draft RIT–T instrument could have potentially been interpreted as requiring RIT–T proponents to undertake market modelling for all non-ISP projects. However, RIT–T applications would typically only use market modelling when generation dispatch outcomes are driving market benefits.
- **Contingent project trigger events for non-ISP projects**: ENA's submission sought clarification as to whether we could have an ongoing role in assessing RIT–T applications relating to non-ISP projects through the contingent project triggers.[75] We note that clause 5.16.6 has been removed from the NER. However, we consider that given there is no AEMO 'feedback loop' for non-ISP projects, it is appropriate for the AER to review these RIT–T applications when they are contingent projects. As such, we would expect to continue seeing an 'AER decision that the preferred option satisfies the RIT–T' and 'the successful completion of a RIT–T application' as part of the trigger for contingent projects that are non-ISP projects. Given this, the RIT–T application guidelines include guidance on what stakeholders would expect of the AER's process when making such a decision. A trigger would also continue to be included that references a successful completion of the RIT–T application.

69 AER, *Final: RIT–T*, August 2020, sub-paragraph 20(b).
70 AER, *Application guidelines: RIT–T*, August 2020, p. 40.
71 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 4; TasNetworks, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.
72 AER, *Application guidelines: RIT–T*, August 2020, p. 41.
73 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 19.
74 AER, *Final: RIT–T*, August 2020, sub-paragraph 15(b).
75 ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 19-20.

5.5 Forecasting best practice guidelines

The FBPG require AEMO to engage with stakeholders on its forecasting processes and practices, including its:

- inputs, assumptions and scenarios, and associated forecasting and modelling applied in the ISP; and
- reliability forecasts, which are a critical input to the statutory requirements under the RRO.

We have made incremental changes to the draft FBPG. We based the content of our draft FBPG on the interim FBPG and the input we had received on our issues paper.[76] Relative to the interim FBPG, the draft FBPG took a different structure to increase clarity and accommodate ISP-related content. Our decision to make incremental changes to the draft FBPG reflects that stakeholder submissions on the draft FBPG were broadly supportive[77], and only suggested incremental improvements.

In response to submissions, we have made the following incremental improvements to the draft FBPG:

- **Forecasting principles and practices**: We previously stated that, when developing its forecasting practices and processes, AEMO must consider how to approach 'scenario and sensitivity analysis for individual forecasts'. We have now provided further explanation around this consideration, by adding that sensitivity testing forecasts, 'can be achieved by stating the accuracy of forecasts (for example, the accuracy of forecast capital expenditure in terms of +/- %) and then using the stated accuracies as a basis to test sensitivities'. This addition reflects MEU's suggestion for AEMO to state the accuracy of, and test sensitivities around its capex assessments and benefits.[78] We agree that is valuable for AEMO to be clear about such sensitivities, which are particularly valuable for, but should not be limited to, capex forecasts.
- **Details for the Forecasting Approach**: We have added that, when developing its Forecasting Approach, AEMO must consider how it can best explain and present its approach to reporting the uncertainties around forecasts, such as how measures of confidence and certainty will be communicated to stakeholders clearly and accessibly.[79] This addition reflects PIAC's suggestion for AEMO to continue to seek how to convey the uncertain nature of its forecasts, including by incorporating measures of confidence and certainty into 'headline' messaging.[80]

---

76 Hydro Tasmania, *Submission re: AER guidelines to make the ISP actionable – Issues paper*, 17 January 2020, p. 10; ENA, *Guidelines to make the ISP actionable: Response to AER's issues paper*, 17 January 2020, p. 20; Origin, *Submission: AER guidelines to make the ISP actionable – Consultation on issues paper*, 17 January 2020; PIAC, *Submission to the AER issues paper – Guidelines to make the ISP actionable*, 4 February 2020, p. 4, AEC, *Submission: Guidelines to make the ISP actionable*, 17 January 2020, p. 2.

77 See ECA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 3; ENA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 5; ERM Power, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 1-2; EUAA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.

78 MEU, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020.

79 AER, *FBPG*, August 2020, p. 15.

80 PIAC, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 3.

- **Consultation principles and practices**:
    - We have clarified that AEMO must have regard to the principles in 'the most recent version' of the consumer engagement guideline for network service providers when developing the ISP.[81] We added this after considering EUAA's submission that best practice consumer engagement has progressed since we first developed the consumer engagement guideline.[82] We continue to reference the consumer engagement guideline, which is principles-based and still relevant, and may be updated from time to time. We also recognise that AEMO will consider this principles-based guidance alongside the guidance in the FBPG on how these principles will operate in practice and in the ISP context.
    - The draft FBPG cited the consultation principle of proactively building consumers' capacity when a matter's complexity is hindering engagement. We have now drawn on EUAA's submission to expand on this point. Specifically, we have now noted that capacity building, in this context, should recognise the importance of long lasting relationships with consumers to improve their skills and understanding of the material.[83] This addition highlights that capacity building will often involve investing in relationships for the long term.
    - The draft FBPG stated that AEMO must consider when more collaborative forms of consultation are warranted. We have now drawn on EUAA's point that best practice will also entail being clear about which engagement approach is being adopted and why.[84] This addition emphasises the importance of AEMO being transparent about its approach, which is valuable given AEMO will use its judgement when determining which engagement approach to apply.
    - The draft FBPG stated that AEMO must consider how to employ a wide range of consultation strategies to receive appropriate feedback. We have now drawn on ECA's submission to add that, when doing so, 'AEMO should be flexible about how it engages, with a view to meaningfully bring stakeholders into the process'.[85] This addition recognises the importance of being adaptive and flexible to support the continuous improvement required for best practice stakeholder engagement.
- **Consultation procedures**: We have incorporated ECA's suggestions to make some minor editorial amendments to the consultation procedures to avoid potential confusion/unintended consequences.[86] This includes revising the definition of 'Consulted Persons' to include 'any other persons who register or express interest, either in response to a public notice calling for expressions of interest or through having previously participated in similar consultations'.[87] This addresses a concern raised by ECA that the definition provided in the draft FBPG could result in AEMO overlooking

81 AER, *FBPG*, August 2020, p. 11.
82 EUAA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.
83 AER, *FBPG*, August 2020, p. 11; EUAA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 3.
84 AER, *FBPG*, August 2020, p. 11; EUAA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 3.
85 AER, *FBPG*, August 2020, p. 12; ECA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 2.
86 ECA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 1.
87 AER, *FBPG*, August 2020, Appendix D.

some stakeholders, particularly given that the draft ISP guidelines did not highlight a clear avenue for stakeholders to register interest in ISP consultation processes.

- **Guidance on active AER involvement:**
    - We have introduced some information about the issues register that we intend to maintain in the context of active AER involvement in the ISP.[88] We have also replicated the expanded requirement in the CBA guidelines for AEMO to demonstrate, in its compliance reports, that it has resolved key issues raised by the AER through the AER's issues register.[89] We previously provided information about an AER issues register in the explanatory statement rather than in any of the draft ISP guidelines. We have now introduced some text about the issues register in the FBPG given stakeholders raised interest,[90] and because it will play an important role in AEMO's active AER involvement.
    - We have provided further clarification that, when AEMO facilitates active AER involvement, this should not be limited to sharing ISP outputs, but should allow the AER to see how AEMO has considered stakeholder input and followed the stakeholder engagement processes in the FBPG.[91] This added clarification reflects PIAC's suggestion for active AER involvement and oversight to apply to internal development and stakeholder engagement, and not just ISP inputs.[92]

88 AER, *FBPG*, August 2020, pp. 7-8.
89 AER, *FBPG*, August 2020, p. 19; AER, *CBA guidelines*, August 2020, p. 5.
90 EUAA, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, pp. 2-3.
91 AER, *FBPG*, August 2020, p. 7.
92 PIAC, *Submission to draft guidelines to make the ISP actionable*, 26 June 2020, p. 3.

Appendix A: Summary and response to submissions

We received 15 submissions on the draft ISP guidelines from the following stakeholders:

1. AGL
2. Australian Energy Market Operator (AEMO)
3. Energy Consumers Australia (ECA)
4. Energy Networks Australia (ENA)
5. EnergyAustralia (EA)
6. ERM Power (ERM)
7. Energy Users Association of Australia (EUAA)
8. Hydro Tasmania (Hydro Tas)
9. Major Energy Users (MEU)
10. Meridian Energy Australia and Powershop Australia (MEA Group)
11. Origin Energy (Origin)
12. Public Interest Advocacy Centre (PIAC)
13. Snowy Hydro (Snowy)
14. Spark Infrastructure (Spark)
15. TasNetworks (TN)

The sections below summarise and respond to stakeholder submissions related to the:

- package of guidelines and instruments to make the ISP actionable (see Table 7)
- CBA guidelines for the ISP (see Table 8)
- RIT–T guidance for actionable ISP projects and non-ISP projects (see Table 9)
- FBPG (see Table 10).

All guidelines to make the ISP actionable

Table 7 summarises and sets out our responses to submissions relevant to the package of guidelines and regulatory instruments to make the ISP actionable.

Table 7: Submissions relevant to all guidelines to make the ISP actionable

Topic	Summary of relevant submission/s	Response
Approach / objective	Most stakeholders supported our overall approach to the draft guidelines, focusing their feedback on raising specific issues or suggesting improvements or refinements. (ERM, p. 1, EUAA, p. 1, EA, p. 1, Hydro Tas, p. 1, TN, p. 1, Spark, p. 1, MEA Group, p. 1, PIAC, p. 1, ENA, p. 3, ECA, p. 1, MEU, p. 1) • ERM was encouraged to see we have taken a principle-based approach in developing the draft guidelines, and TasNetworks also supported the four principles. (ERM, p. 1, TN, p. 1) • Hydro Tasmania considered our proposed framework, through the transparency and engagement elements, will hold AEMO accountable for the ISP process, inputs, findings and conclusions. Similarly, ECA considered the transparency and rigour required in the draft guidelines—including the assumptions and engagement—to be important (Hydro Tas, p. 1, ECA, p. 1) • Spark welcomed the streamlined regulatory processes	Given most stakeholders supported our overall approach to the draft guidelines, we have not changed the overarching principles or objective. However, in line with PIAC's submission, we recognise the need for the objective to clearly link to the NEO and the long term interests of consumers. As such, we have ensured it is clear the objective is drawn from the NEO. We have not adopted PIAC's submission to change the objective itself. Our objective reflects the market-wide nature of the ISP and RIT–T CBAs, which is required under the NER.[93] This considers the costs and benefits of an investment project not just to the asset owner, but across the market as a whole. As such, it aggregates the costs and benefits across 'all those who produce, consume and transport electricity in the market'. This is important in promoting efficient investment in electricity services because the electricity market operates across a meshed network, so investment in network or generation (or other) assets have 'network effects' that

93 NER, clause 5.15A.1(c) for the RIT–T, and market benefit classes specified in NER, clause 5.15A.2(b)(4). NER 5.22.10(c) then applies the same market benefit classes for the ISP, and NER, clause 5.15A.3(b)(4) aligns the RIT–T for actionable ISP projects to the ISP.

	established through the ISP rules and our draft guidelines. (Spark, p. 1) • EUAA appreciated the increased level of information that will be provided to all stakeholders through the draft guidelines. However, it noted as a general regulatory framework concept, more information is a necessary, but not sufficient, condition for better regulatory decision making. (EUAA, p. 2) Snowy Hydro did not support our overall approach to the draft guidelines. It considered they do not adequately support the implementation of the ISP, and in particular actionable ISP projects, because they seek to embed the existing cost-benefit test in the RIT–T. (Snowy, p. 1) PIAC recommended the guideline objectives be reworded to meet the long-term interests of consumers as defined in the NEO, and should not refer to the net economic benefit of those who produce or transport electricity. PIAC considered the ISP is a far more strategic and fundamental planning process than a RIT–T. PIAC considered it essential that the ISP be in the interests of consumers first and foremost. (PIAC, p. 1)	affect other participants in the market. We disagree with Snowy Hydro. We consider the guidelines do support the implementation of the ISP (see section 3.3.2). We also consider the guidelines embed a standard CBA in the ISP and RIT–T processes, and align the RIT–T with the ISP (see Table 8 under 'ISP / RIT–T alignment').
Prescription vs flexibility	Most stakeholders supported the level of prescription / flexibility we provided in the draft guidelines. (ERM, p. 1-2, EUAA, p. 1, ENA, p. 3, 5, EA, p. 1, TN, p. 1-2, ECA, p. 2, MEA Group, p. 1): • ERM previously supported more prescriptive CBA guidelines. However, ERM considered that while the draft CBA guidelines provide AEMO with flexibility around how it identifies optimal investments, it supports the AER's proposed approach for a higher level of prescription around key CBA steps to promote transparency and justification of decisions.	Given most stakeholders supported the overall level of prescription versus flexibility in the draft guidelines, we have not changed this. In response to AEMO's concern, we consider our CBA guidelines and FBPG provide significant flexibility for AEMO in developing ISPs. The CBA guidelines provide substantial flexibility for AEMO to consider discrete market risks in the ISP CBA, and to choose what projects to include in its development paths. See our response under 'Scenarios', 'Sensitivity testing' and 'Development paths' in Table 8. The FBPG also provide AEMO with the flexibility to update

- ENA supported our proposed flexibility in the CBA guidelines and for AEMO in conducting its ISP analysis, coupled with increased transparency to ensure outcomes reflect consumer interests. ENA considered consultation and transparency around the inputs, assumptions and scenarios adopted in the ISP is particularly important given the interaction with RIT–Ts.
- TasNetworks supported the view that transparency provides an essential counter-balance to AMEO flexibility in developing the ISP, its scenarios and the optimal development path.
- ECA considered we got the balance between prescription and flexibility right in the draft guidelines. However, ECA considered that success will rest heavily on AEMO bringing consumer and other voices into the process in meaningful ways that builds trust and confidence in the ISP. It also considered AEMO's approach must incorporate a sophisticated view about how energy consumers are using energy, engaging with new services and networks locally.
- MEA Group recognised a certain level of prescription is required to ensure the guidelines are meaningful and effective. However, it considered that minimum regulatory intervention into the electricity market is a preferred outcome for all stakeholders.

AEMO raised a concern that the draft guidelines introduce analytical limits on its flexibility—for example by not allowing AEMO to treat discrete market risks such as early closures of plant, or delays in development as potential events against which option values (and risk tolerances) may be assessed. AEMO also raised other specific concerns related to flexibility. (AEMO, p. 2)

Snowy Hydro considered the draft guidelines provide AEMO with the IASR outside of the biennial ISP development process to incorporate updates in market data and associated forecasts.[94]

In response to Snowy Hydro, we consider we have provided an appropriate level of flexibility for RIT–T proponents in applying the RIT–T to actionable ISP projects. We consider our approach to the CBA guidelines provides alignment between the ISP and RIT–T for actionable ISP projects (see our response under topic 'ISP / RIT–T alignment' in Table 8).

In response to AGL and Origin, we consider our approach to flexibility versus prescription for AEMO (in developing the ISP) is consistent with clause 5.22.5(e)(2) of the NER. We consider it is appropriate to provide AEMO with flexibility in performing the ISP CBA, provided it is balanced with prescription around the key CBA steps, and strong transparency and stakeholder engagement requirements. Further oversight of AEMO's ISP process is provided through the rules framework, which includes an AER transparency review of key inputs and assumptions, and the ISP consumer panel.

94 AER, FBPG, August 2020, p. 8.

	appropriate flexibility in specifying its inputs, assumptions and scenarios, and welcomed the flexibility to AEMO in determining the optimal development path. However, it considered the same flexibility is not afforded to TNSPs in applying the RIT–T to actionable ISP projects, resulting in misalignment of the approach to risk in the ISP and the RIT–T. (Snowy, p. 4-5) AGL did not support the level of prescription versus flexibility we provided in the draft guidelines. AGL considered our approach represents an expansion on the flexibility contemplated in the rules, and therefore the draft CBA guidelines has the effect of weakening the certainty and economic rigor otherwise required by the rules. AGL considered full flexibility, and the ability to ignore results from the decision making approaches used, to be contrary to clause 5.22.5(e)(1), which requires the guidelines recognise the risk of uncertainty. (AGL, p. 1) Similarly, Origin is concerned with the level of discretion provided to AEMO in terms of the CBA, particularly its ability to take risk-averse approaches. It considered strong transparency measures are therefore crucial in managing this risk. (Origin, p. 1)	
Classification framework	ERM, PIAC and EUAA supported the classification framework used in the draft FBPG and CBA guidelines. • ERM strongly discouraged against the softening of classification decisions in the draft guidelines in developing the final guidelines. (ERM, p.1-2) • PIAC supported the proposed approach to classify elements of the draft guidelines as either requirements, considerations or at the discretion of AEMO and/or RIT–T proponents. (PIAC, p. 2) • EUAA, with one exception for the FBPG, agreed with the classification framework for whether the CBA guidelines and FBPG are binding on AEMO and support the required	Given stakeholders supported the classification framework used in the draft guidelines, we have not changed this. See Table 10 for our response to EUAA's recommended change to our classification decisions in the FBPG. We agree with PIAC about reviewing our classification decisions and having feedback loops for our own processes. We consider this feeds into how we will review the guidelines to make the ISP actionable more broadly. We set out some criteria to guide future reviews of the guidelines in this final decision.

	transparency around the 'must have regard to' category. (EUAA, p. 2) PIAC noted our classification of elements as well as our rationale for classification must be reviewed periodically in order for the ISP and the guidelines to remain effective in the longer term. PIAC also noted, more broadly, that we should implement feedback and error correction loops in our assessment processes. (PIAC, p. 2)	
AER oversight, including compliance and enforcement	PIAC, EUAA and ECA supported an active AER oversight role in the ISP process, including through the AER transparency review in the NER. • PIAC considered active AER involvement and oversight not only of the outputs of the ISP but also the internal development and stakeholder engagement is an important component in ensuring the robustness of the ISP and to help engender trust in the overall process. (PIAC, p. 3) • EUAA supported the active AER involvement in the process of preparing the ESOO/IASR and the role of transparency reviews. (EUAA, p. 2) • ECA supported the AER role envisaged in the draft guidelines, which is not to duplicate AEMO's role in developing the ISP, but to provide strong and independent oversight. (ECA, p. 1) Similarly, Hydro Tasmania considered the proposed framework will hold AEMO accountable for the ISP process, inputs, findings and conclusions (Hydro Tas, p. 2). AGL recommended we include a requirement in the guidelines that AEMO's assessment of costs and market benefits be subject to AER review. AGL considered this is important to ensure AEMO complete this assessment effectively, and would improve the economic rigour of the net economic benefit assessment. It also considered such a requirement would minimise consumer	We agree that we should have an active oversight role in the ISP development process, and consider the AER transparency reviews and proactive compliance monitoring support this. As such, we have added to our compliance and enforcement approach in this final decision to clarify that we will welcome stakeholder input throughout the ISP and RIT–T processes, and will seek to engage regularly with AEMO in monitoring compliance and performing AER transparency reviews. In response to AGL's recommendation, we have not included an AER review of AEMO's cost and benefit assessment in the guidelines. We consider this is a something we would need authority from the NER to include in our guidelines. We also consider the ISP inputs and assumptions are critical to the ISP CBA outcomes, and the NER provides for AER oversight of these through the transparency reviews under clause 5.22.9 and 5.22.13. In response to ENA's confirmation request, we consider RIT–T compliance reports can be provided as a table (and potentially included as an appendix to the PACR). We also consider there will be no formal AER approval of the RIT–T compliance reports.

	investment risk by allowing AEMO to benefit from AER's experience and expertise as the economic regulator. (AGL, p. 1-2) EUAA and EA also agreed with our proposed approach to compliance and enforcement (C&E). • EUAA supported reports by AEMO/ TNSPs that are then reviewed by the AER. It looks forward to being able to engage with the AER throughout the ISP process using the issues register and not having to wait for milestones. EUAA also looks forward to the feedback processes during preparation of the ISP working effectively so that there is never any cause to get into a dispute process, given disputes can only be raised after the ISP is completed. (EUAA, p. 2) • EA agreed that our C&E approach will hopefully avoid areas of dispute around ISP and RIT–Ts, and help ensure that investment decisions reflect the best possible value for consumers. (EA, p. 1) ENA sought confirmation that the RIT–T compliance report can be issued as a table (and potentially included as an appendix to the PACR), and that there is no expectation that the compliance report will be formally approved by the AER prior to the TNSP starting the CPA process. (ENA, p. 18)	
Transitional arrangements	EUAA and TasNetworks understood or supported the transitional arrangements proposed for the application of our draft guidelines. EUAA also looks forward to the feedback loop and the AER's contingent project process ensuring that there is still a robust analysis of the net benefits giving comfort that the risk of projects with stranded asset risk being approved should be low. (EUAA, p. 2, TN, p. 2) Snowy Hydro considered the transitional arrangements in the guidelines should allow the 2020 actionable ISP projects to apply	We have not made any changes to the transitional arrangements set out for the guidelines to make the ISP actionable. This includes maintaining where the CBA guidelines specified, for avoidance of doubt, for any RIT–T application where AEMO has not specified which scenario/s or weightings to apply, the RIT–T proponent must consider the AER's guidance on estimating probability-based weightings in the RIT–T application guidelines. In response to Snowy Hydro, we cannot use the guidelines to direct how the NER apply to actionable ISP projects. It is important to

	the actionable ISP rules post-PACR stage. (Snowy, p. 4) ENA sought confirmation that although the CBA guidelines will not apply to 2020 actionable ISP projects that have completed a PADR, the automatic feedback loop contingent project application provisions in the Rules can still be accessed by TNSPs for these projects. (ENA, p. 18). ENA considered we should provide further clarity on whether and how scenarios in the 2020 ISP will bind RIT–T proponents, and similarly the status of other 2020 ISP parameters. (ENA, p. 2) ENA urged AEMO to reflect the CBA guidelines' approach of specifying the identified need and relevant scenarios for ISP/RIT–T alignment in its 2020 ISP as for as possible for actionable ISP projects to which the new CBA guidelines will apply. (ENA, p. 10)	distinguish between the transitional arrangements provided in the NER and those provided in these guidelines: • The NER transitional arrangements deem the 2020 ISP compliant with the new framework and allow for RIT–Ts for some existing projects to access the new rules framework (including the automatic contingent project application triggers in clause 5.16A.5 of the NER). • The transitional arrangements in our guidelines dictate how the guidelines (not the NER) apply to in-flight and future ISPs and RIT–T applications. Under these arrangements, our final guidelines do not apply to RIT–T applications for actionable ISP projects where a draft report has been published. Confirmation provided to ENA in respect of the new contingent project triggers applying. Yes, this is even the case for existing actionable ISP project at the clause 5.16.6 stage (see NER clause 11.126.4(b)(2)). No action required. We support ENA's position but acknowledge its submissions on the 2020 ISP are AEMO's decisions, not ours. The 2020 ISP is deemed compliant with the NER and as such is not bound by the guidelines.
Timing	AEMO requested that the finalisation of the draft CBA guidelines be postponed, to allow the opportunity to consider AEMO's practical insights on using the guidelines, arising from the experience of producing the 2020 ISP. AEMO considered that if the guidelines are finalised without addressing AEMO's concerns, significant difficulties will persist for the development of the 2022 ISP process. (AEMO, p. 1)	We have not delayed the finalisation of our guidelines to make the ISP actionable. These have already been delayed from 30 June 2020 in response to the finalisation of the rules framework and the effects of the Covid-19 pandemic. It is important that the new guidelines are in place at the start of the two years during which the 2022 ISP will be prepared. We have responded to AEMO's concerns in finalising the guidelines, and explain our changes and rationale in this final decision.

CBA guidelines (ISP component)

Table 8 summarises and sets out our responses to submissions on the CBA guidelines (ISP component).

Table 8: Submissions relevant to the CBA guidelines (ISP component)

Topic	Summary of relevant submission/s	Response
Uncertainty of inputs and assumptions	PIAC strongly supported the draft CBA guidelines requiring that, where AEMO has chosen a single value from an underlying range or distribution for key inputs, that it should present the underlying range or distribution as well. (PIAC, p. 2)	We agree with PIAC. However, we note that the guidance to present the underlying range is only a binding consideration for key inputs used to develop scenarios. It is a discretionary element for key inputs in general.
Discount rate	MEA Group noted that the selection of a discount rate for non-network options should carefully consider the extent to which the discount rate applied is above the lower boundary (i.e. an equivalent AER-regulated cost of capital). As this point is proposed as discretionary guidance for AEMO, MEA Group considered consultation with experts and/or industry should be sought when determining an appropriate discount rate, and what should be considered a reasonable premium above the lower boundary, assuming such projects may not be developed as part of a network's regulatory asset base. (MEA Group, p. 1-2)	We agree with MEA Group, although we have maintained the classification of guidance on the discount rate from the draft CBA guidelines. We expect AEMO will follow our discretionary recommendations where practicable and appropriate. We also note our recommendation for the choice of discount rate(s) to promote competitive neutrality between network and non-network options in a development path. We consider principle-based guidance on the discount rate is appropriate because it is a challenging parameter to estimate for a whole-of-system plan.
Values of customer reliability (VCR)	The ENA recommended our guidance on VCRs in the draft CBA guidelines be expanded to explicitly refer to the WALDO VCR estimates and methodology being developed by the AER, as a subset of the AER's VCR estimates. (ENA, p. 9)	We have not referred explicitly to VCRs for widespread and long duration outages (WALDO) in the CBA guidelines. This AER process is still undergoing consultation. We consider our guidance on VCRs is sufficient to encompass WALDO VCRs if the AER decides to include them in their VCR methodology.
Scenarios	ECA considered that scenarios should be more than just different speeds of variation of different input parameters, but different ways of thinking about how the energy transition might unfold in terms of consumer choices, social practice, technologies, and the structure	Our CBA guidelines recommend 'stretching' scenarios in response to submissions by ENGIE and ECA to the issues paper. This is in line with ECA's submission to the draft guidelines and encourages a broad view of scenarios. Our guidance about using the most

	of the economy etc. It considered the draft CBA guidelines adopts the narrow view by requiring that parameters vary around a 'most probable value'. ECA suggested this be amended to take the broader approach. (ECA, p. 4) ECA considered our draft CBA guidelines appear to suggest that scenarios can be developed in terms of 'uncertainties' deviating from an optimal development path. However, ECA considered the value of scenarios in the ISP context is that they 'come first', providing a basis for thinking about the optimal development path. (ECA, p. 4) AEMO considered the draft guidelines essentially require discrete risks to be modelled as separate scenarios, requiring a plethora of individual scenarios as to undermine the value of scenario analysis. Ideally, these events can be used to assess option value and risks to help in selecting one development path over another, but need not be tested in every scenario. (AEMO, p. 2)	probable value(s) for each input variable and/or parameter that forms the most likely scenario is a separate consideration. It is about ensuring the most likely scenario is based on the most probable input values, which is important for NER clause 5.22.5(e)(3). Because this guidance is about one scenario only, we do not consider it adopts a narrow view of scenarios. In response to ECA's view on uncertainties, we have clarified the guidance on considering the major uncertainties affecting the costs, benefits and need for investments in an optimal development path. We did not intend for this guidance to be interpreted as 'uncertainties' deviating from an optimal development path'. The intent of this guidance is for AEMO to consider major sectoral uncertainties in developing a range of future scenarios. This is important because the purpose of scenario analysis is to assess and manage uncertainty about how the future will develop and affect investment needs in the NEM. In response to AEMO's submission, the draft CBA guidelines do not require AEMO to model discrete risks as separate scenarios. However, the CBA guidelines do require AEMO to consider: • Major sectoral uncertainties (which can include discrete risks) in developing a range of future scenarios. This is important to achieving the purpose of scenario analysis (see above). • Using internally consistent inputs for each scenario, such that each scenario represents a plausible market environment. We do not consider discrete risks occur in a vacuum—they affect other input variables in a scenario, and this is one reason why scenarios are a useful way of assessing how key risks can impact future market conditions, and consequently, the costs and benefits of different development paths.
Development	AEMO considered its flexibility is restricted by requiring that all	We agree with AEMO that the ISP should be flexible to respond to

paths	development paths should remain fixed across scenarios, essentially forcing non-anticipatory approaches. In reality, decisions around future investments need not be made now, and should be able to vary in different futures. AEMO recommended a single development path that is dynamic in nature and therefore varies depending on the future that unfolds. AEMO further stated decisions that need to be made now should be common to all scenarios as the decision is made without the benefit of future information, but decisions that do not need to be made until later should be allowed to vary across scenarios, which seems to better align with the expressed intention of Energy Ministers on the ISP. (AEMO, p. 2)	how the future develops. We also agree that some projects should be allowed to vary across scenarios. Our CBA guidelines provide for this by allowing AEMO flexibility to choose which projects to include in its development paths and hold fixed across scenarios (e.g. projects that may become actionable ISP projects), and which projects to include in its market development modelling (as modelled projects in 'states of the world' under each scenario). The latter projects will vary across scenarios and could include projects that may become future ISP projects. We have provided clarification on this point in the final CBA guidelines. As such, our CBA guidelines do not prevent AEMO from presenting a 'dynamic' optimal development path, where actionable ISP projects are fixed but future ISP projects vary across scenarios. Further, the biennial nature of the ISP allows AEMO the flexibility it is seeking, to respond dynamically as the future unfolds. At each ISP, the CBA is repeated to determine next set of actionable ISP projects. It may be that some of the future ISP projects identified in the previous ISP become actionable ISP projects, while others drop off altogether.
Re-testing ISP projects	ENA supported the discretion our draft guidelines give to AEMO on re-testing actionable ISP projects that do not yet have an approved contingent project assessment (CPA). That is, re-testing whether they continue to be justified in future ISP development paths. ENA considered there may be circumstances where a CPA is not yet approved, but where AEMO has a reasonable expectation that the project will proceed, with costs that are consistent with an earlier ISP assessment. In this case, it considered there may be more relevant priorities for AEMO to focus on in the ISP. (ENA, p. 7)	Our draft (and final) CBA guidelines provide a binding consideration for AEMO, which means AEMO must have regard to re-testing these ISP projects, and must explain its reasoning if it chooses not to do so. We consider it is important for AEMO to have regard to re-testing these projects because the ISP needs to be dynamic and respond to changing market conditions. If market conditions change, there may be ISP projects that were previously actionable that are no longer justified (in terms of their cost and benefit contribution to the development path).
Commercial and technical feasibility of ISP	TasNetworks supported the draft CBA guidelines' view that commercial and technical feasibility of a project should be considered prior to including it in the optimal development path.	We have not changed the draft guidance on commercial and technical feasibility for the final CBA guidelines, except to refer to the RIT–T application guidance for further clarity. We consider it

projects	(TN, p. 2) However, TasNetworks also considered: • AEMO should not look at distributional effects in determining commercial feasibility of a project. • Actionable ISP projects that are regulated transmission projects should be assumed to be commercially feasible and AEMO would need only to verify this with the TNSP, which carries the regulatory investment risk. For all other actionable ISP projects, AEMO may apply some extra scrutiny to determine feasibility.	appropriate for AEMO to have discretion in how it determines or confirms project feasibility. However, we expect it would not be possible for AEMO to determine project feasibility without input from the relevant TNSP or non-network proponent (asset owner). We agree with TasNetworks that AEMO should not be considering distributional effects in determining the commercial feasibility of a project. Our CBA guidelines require AEMO to present key distributional effects of the costs and market benefits of its optimal development path, but does not allow AEMO to use this information to select its optimal development path. This is because policy makers are best placed to manage distributional effects, not AEMO. Further, commercial and technical feasibility is a requirement for selecting development paths, which occurs before the estimation of costs and benefits. As such, distributional effects should not yet be known.
Proposed and modelled generation projects	Hydro Tasmania considered that announced, 'real-world' projects should be given additional consideration in AEMO's ISP modelling over and above theoretical future generation. It considered having a proponent investing in a project or project investigation should elevate the likelihood of that project being reflected in the modelling. (Hydro Tas, p. 3)	We have not changed our guidance from the draft CBA guidelines. However, we note that the guidelines require AEMO to include, in its process for selecting development paths, credible generation (and other non-network) projects that are proposed but not sufficiently progressed to be classified as anticipated.
Valuing costs	Hydro Tasmania strongly supported the intention under the CBA guidelines for AEMO to work with TNSPs and/or non-network proponents to develop cost estimates for ISP projects. However, ENA considered our draft CBA guidelines should require AEMO to adopt TNSPs' capital cost forecasts, to avoid RIT–T projects failing the AEMO feedback loop or triggering frequent ISP updates. ENA is concerned the new framework could become unworkable if AEMO's assumptions around the costs of ISP projects do not reflect TNSP's expectations of outturn costs, based on their project implementation experience. (Hydro Tas, p. 2, ENA, p. 3, 6)	In response to ENA, we have not changed the discretionary guidance for AEMO to work with relevant TNSPs and/or non-network proponents in estimating the costs of development paths as accurately as possible. We do not consider it is appropriate for our guidelines to direct AEMO in this way. However, we expect it would be challenging for AEMO to estimate the cost of ISP projects without working with the relevant TNSP or non-network proponent (asset owner). We agree with ENA that AEMO should check relevant cost estimates against recent tender outcomes for Victoria and final

	ENA supported our proposed guidance for AEMO to check cost estimates against recent contingent project outcomes. However, it noted there is no CPA process for transmission investments in Victoria. ENA recommended the CBA guidelines be broadened for AEMO to also have regard to recent tender outcomes for Victoria, and final project outcomes (including variations). (ENA, p. 6) MEU considered the guidelines need a process to guide what happens if the forecast capex is wrong (particularly if the estimate proves to be low) as it gets refined from the ISP through the RIT–T and subsequent processes. MEU considered this is especially important after the contingent project application is made. MEU based this view on the experiences of EnergyConnect and AEMO's more recent statement that they were increasing capex estimates by up to 30 per cent for their 2020 ISP. (MEU, p. 4)	project outcomes (including variations). We have amended the guidelines to allow for this. We acknowledge MEU's concern, although we note it is partially out of scope for our guidelines, which consider the ISP and RIT–T processes only. However, we note: • The CBA guidelines require that, if AEMO establishes there is a material degree of uncertainty in the costs of an ISP project, the cost is the probability weighted present value of the direct costs of the ISP project under a range of different cost assumptions. • The NER requires that the cost of an actionable ISP project that is put through AEMO's feedback loop is the maximum cost that can be proposed to the AER in a contingent project application (NER, clause 5.16A.5(d)). • See Table 9 under 'Capex updates' for a more detailed response.
Valuing market benefits	ENA supported the discretion provided in the draft CBA guidelines for AEMO to determine the appropriate approach to quantifying market benefits and the requirement for AEMO to present the breakdown of each class of market benefits in the ISP. (ENA, p. 8) Hydro Tasmania considered that competition benefits in the best interest of customers may not be sufficiently captured under the cost-benefit framework. It considered this is because where projects increase competition and lower prices for consumers, the CBA may regard this as a wealth transfer between sector participants and may not attribute this as a market benefit. (Hydro Tas, p. 2) Snowy Hydro considered the process for assessing benefits is too narrow for actionable ISP projects. It considered that for these projects a "whole-of-system" benefits approach needs to be	We have not changed our guidance on market benefits from the draft CBA guidelines (for the ISP or RIT–T components). In response to Hydro Tasmania, this means we have not changed our guidance on wealth transfers, which affects how competition benefits are estimated. In our view, lower dispatch costs from more competitive bidding behaviour drives competition benefits, rather than a redistribution of consumer and producer surplus. This approach appropriately captures the benefits of increased competition from a market-wide CBA perspective. We do not agree with Snowy Hydro that our process for assessing benefits is too narrow for actionable ISP projects. The RIT–T and ISP both capture 'whole of system benefits'. Specifically, the RIT–T captures costs and benefits to all those who produce, consume and transport electricity in the market. The NER specify which

	adopted in order to capture the full benefits of such long-term, strategic projects. Snowy Hydro considered these should include long term risk management, energy security which includes avoided intervention and long term competition benefits—and could be achieved by expanding the definitions of 'competition benefits' and 'option value' in the CBA guidelines. (Snowy, p. 3)	market benefit classes AEMO and RIT–T proponents must consider; which include competition benefits and option value. These also include changes in load shedding and costs to other parties, which should capture avoided intervention and separation events. AEMO and RIT–T proponents can also propose new classes of market benefits to consider.
Selecting an optimal development path	EUAA, EA, Hydro Tasmania, ENA and TN accepted or supported our proposed guidance for selecting an optimal development path: • EUAA accepted the proposed level of AEMO flexibility in selecting the optimal development path and looks forward to seeing how it works out in practice. (EUAA, p. 2) • EA, ENA and Hydro Tasmania supported or are comfortable with our proposed requirement on AEMO to establish a risk-neutral ranking of development paths, and compare this to the ranking under its preferred approach (which can be a risk averse approach). (EA, p. 1, Hydro Tas, p. 1-2, ENA, p. 8) • TasNetworks and ENA supported our requirement for AEMO to select an optimal development path that reflects its view of customers' level of risk aversion, as they ultimately bear the risk and cost of transmission investment. EA also considered this has merit, but noted there may be challenges in distilling this preference in practice. (TN, p. 2, EA, p. 1, ENA, p. 8) • ENA supported the requirement for AEMO to identify the additional costs associated with adopting a risk averse approach. (ENA, p. 8) AGL did not support our proposed guidance for AEMO in selecting an optimal development path. It considered the inclusion of professional judgment in the selection process adds an unnecessarily element of discretion and uncertainty to a selection process which should instead be based on the net economic	Given most stakeholders accepted or supported our approach in the draft guidelines, we have not changed the approach for the final guidelines. In response to AGL and Origin, we consider our approach is consistent with clause 5.22.5(e)(2) of the NER, which requires the CBA guidelines to provide flexibility for AEMO in selecting an optimal development path. We consider we appropriately balance this flexibility with strong transparency requirements. However, we have amended the wording to clarify that AEMO uses its professional judgement in selecting a decision making approach, not in addition to selecting a decision making approach, based on AGL's submission. We agree with Origin that AEMO should consult on its approach / methodology for selecting an optimal development path. See Table 10 under 'Consultation on the ISP' for our detailed response. In terms of Origin's recommendation for a risk-neutral sensitivity in the RIT–T CBA, the RIT–T continues to apply a risk neutral approach to selecting the preferred option, albeit with scenarios specified by AEMO. Further, AEMO is required to present a risk neutral approach to ranking development paths under the full set of IASR scenarios. Also see our RIT–T response in Table 9 under 'Sensitivity testing'. In response to ECA and AEMO, we consider scenario analysis is a practical and commonly used tool in CBA. It is also common practice to use risk neutral approach in evaluating options under

benefit and an assessment of the appropriate treatment of risk. AGL recommended a change to the CBA guidelines on this basis. (AGL, p. 1)

Origin submitted that it continues to be concerned with the level of discretion provided to AEMO in terms of the CBA, particularly its ability to take risk-averse approaches, as such approaches can be conservative and lead to over-investment. It considered, strong transparency measures are therefore crucial in managing this risk. As a result, Origin supported the draft guidelines requiring AEMO to explain how the risks it has considered has informed its choice of methodology and to be transparent about the costs of deviating from a risk neutral approach when conducting its CBA in the draft ISP. Origin considered that transparency could be improved by (Origin, p. 1):

- requiring AEMO to consult on its methodology, including its choice of a risk averse approach, for each ISP (at the IASR stage)
- requiring TNSPs to include a risk-neutral approach as a sensitivity, if directed by AEMO to use a risk-averse methodology.

ECA considered probability weighting is less suited to scenario work because the analyst does not have the information they need to meaningfully assign probabilities. It also considered each scenario is a set of point estimates across a wide range of parameters most of which are continuous real numbers. The different scenarios, which requires assigning likelihoods (or probabilities) to scenarios. This is reflected in general CBA guidance and stakeholder submissions to the issues paper.[95] We also consider likelihoods do not have to be precise scientifically- or mathematically-determined probabilities, and can also be relative.

Further, where scenarios do not differ widely and AEMO has no evidence or rationale for assigning a higher likelihood to one over another, it can assign equal likelihood weightings.

95 See Commonwealth of Australia, *Handbook of Cost Benefit Analysis*, January 2006, pp. 70-7; EnergyAustralia, *Submission: AER – Guidelines to make the ISP actionable – Issues paper*, 17 January 2020, p. 5; Monash University (Associate Professor Guillaume Roger), *Turning ISP into action: submission as a comment* [to issues paper], 15 January 2020, pp. 9-10; AEC, *Submission: Guidelines to make the ISP actionable* [to issues paper], 17 January 2020, p. 2; Delta, *Submission: Guidelines to make the ISP actionable – Issues paper*, 17 January 2020, p. 3; Origin, *Submission: AER guidelines to make the ISP actionable – Consultation on issues paper*, 17 January 2020, pp. 1, 3; EUAA, *Submission: AER guidelines to make the ISP actionable* [to issues paper], January 2020, pp. 6, 9, 10; MEU, *Submission: Guidelines to make the ISP actionable issues paper*, 22 January 2020, pp. 7-8.

	probability of any scenario actually occurring is therefore zero in every case. (ECA, p. 4-5) Similarly, AEMO considered the challenging task of assigning relative likelihoods to every scenario becomes even more difficult when there is a large number of only slightly different scenarios to consider. (AEMO, p. 2)	
Sensitivity testing	Hydro Tasmania considered the CBA guidelines should include guidance for AEMO to consider modelling a least-cost NEM which excludes the effects of some policies. (Hydro Tas, p. 3) MEU considered the guidelines should require an explicit statement as to the accuracy of the capex assessments and benefits (e.g. in terms of +/- %) and then sensitivities should be tested around the stated accuracies. For example, if the capex accuracy is assumed to be +/- 30%, then the sensitivities should go at least to these boundaries (i.e. +/- 30%) if not beyond these values. MEU considered this provides confidence that the expected net benefits are likely (or not) to be delivered within the expected accuracies of the inputs. (MEU, p. 4) AEMO considered the draft guidelines essentially require discrete risks to be modelled as separate scenarios, rather than sensitivities. It considered that ideally, these events can be used to assess option value and risks to help in selecting one development path over another, but need not be tested in every scenario. (AEMO, p. 2)	We have not changed our binding guidance on sensitivity testing in the CBA guidelines. In response to Hydro Tasmania, we have not required sensitivity testing on particular inputs (e.g. government policies) because we consider the important inputs to sensitivity test may differ across ISPs based on market conditions, stakeholder feedback and AEMO's continuous improvement processes. In response to MEU, AEMO also has flexibility to sensitivity test the cost estimates for development paths or ISP projects. Indeed, our guidelines encourage this through discretionary guidance. We have added to this to reflect the intent of MEU's submission, as the uncertainty of cost estimates is important to present for high fixed cost transmission investments. In response to AEMO, our CBA guidelines provide full flexibility to AEMO in how it conducts sensitivity analysis on its optimal development path. This includes which sensitivities it chooses to test. For example, AEMO could test how the costs and benefits of its optimal development path change if coal fired power generation were to retire earlier in a slow growth scenario. However, we consider it important for AEMO to be consistent and transparent with its analysis, and be informed by feedback from stakeholders. These principles apply to scenarios and sensitivities. However, we note that, unlike scenarios, AEMO may identify new sensitivities after the draft ISP where this is needed to test its outcomes to

		identify key inputs and assumptions for transparency purposes.
Cross checks	EA supported the requirement for AEMO to conduct 'cross checks' on its optimal development path. However, EA also suggested AEMO may find it useful for the CBA guidelines to list example cross checks. EA suggested (EA, p. 2): • capital efficiency or 'bang for buck' measures which often complement net benefits as an objective measure as they tend to ignore the overall scale of investment • the technical feasibility of outcomes in the form of separate analysis conducted in AEMO's recent Renewable Integration Study (RIS) • cross checks similar to those the AER applies in its capex assessments for TNSPs, in the form of deliverability of proposed investment programs.	We have not changed our binding guidance on cross checks in the CBA guidelines. We consider EA has listed useful examples of cross checks, and we have added one of these to the discretionary examples provided in the draft guidelines. However, we note AEMO has full discretion on which cross checks to apply. We did not include the example for AEMO to check the technical feasibility of outcomes in the form of separate analysis conducted in AEMO's recent Renewable Integration Study (RIS). This is because we do not consider cross-checks should require substantial new analysis in another document or process. There is also already an example from the draft guidelines that uses stakeholder feedback to gauge the feasibility of ISP development opportunities. We also did not include the example for AEMO to use capital efficiency or 'bang for buck' measures. This is because it is not consistent, and may conflict, with the guidelines objective to optimise the net economic benefit to all those who produce, consume and transport electricity in the market.
Distributional effects	PIAC, EA, ENA and TasNetworks supported the draft CBA guidelines requirement for AEMO to present key distributional effects of its optimal development path: • PIAC considered the allocation of risk or recovery of costs (such as between generators and consumers or between consumers in different NEM regions) has significant impacts on the fairness and equity of large investments. It considered providing information on the distributional effects helps highlight to stakeholders where some form of intervention or reform may be appropriate to address any inequity in risk allocation or cost recovery but still ensure the optimal whole-	Given the number of stakeholders who supported the presentation of distributional effects, we have added to the discretionary guidance to provide more specific recommendations and examples. This includes Spark's recommendation to include bill impact estimates. We agree with TasNetworks that distributional effects should not affect AEMO's selection of an optimal development path, so have maintained this part of the draft guidance in the CBA guidelines.

	of-system solution is progressed. (PIAC, p. 2) • EA considered the allocation of costs and benefits may not be a relevant for overall investment decisions, but these considerations are likely to be critical for stakeholders, including governments and consumer groups, including under future cost sharing arrangements to be examined by the ESB. (EA, p. 2) • TasNetworks considered distributional effects should be presented but should not influence AEMO's optimal development path. (TN, p. 2) • ENA supported requiring AEMO to identify distributional impacts, but considered this would not be appropriate for each subsequent RIT–T assessment (ENA, p. 8) Spark considered there is still the potential for a disconnect between the net economic benefits arising from various development paths and the cost impact on customers. To help stakeholders and customers to understand the differences and impacts, Spark recommend AEMO be required to present the expected savings to electricity customers for each development path, and where possible, for each actionable ISP project. Spark considered providing this information is consistent with government priorities to reduce the overall cost of energy for consumers. (Spark, p. 1)	
Funding contributions	ENA recommended the draft CBA guidelines be amended so all third party funding contributions can be subtracted from the capital costs of ISP projects (that is, contributions from market participants should be treated as an externality and not a wealth transfer). ENA considered this ensures the guidance is robust to technology developments and consistent with the REZ models being developed by the ESB. The ENA also considered (ENA, p. 5, 8):	Our approach in the draft CBA guidelines is consistent with a market-wide CBA and is neutral towards contract and ownership options (see section 5.1.1 under 'Wealth transfers'). We have not changed this position for the final guidelines. We consider generator contributions to ISP projects do not change the aggregate costs and benefits across the market, they simply change the distribution of those costs and benefits. As such,

	• third party funding (whether it is from a government, generator or any other party) will reduce the amount customers have to pay for the investment through regulated charges, and drawing a distinction based on which party is providing the funding means some investments where the benefits customers receive outweigh the costs will not proceed • this issue will become more prevalent as technology further develops, with some investments (such as storage devices) able to provide both network support and non-regulated services • the draft guidelines approach will tilt the playing field towards non-network provision of these services (where only the contract costs will be included in the ISP and RIT–T CBA) and away from network provision (where the AER's guidance means that the whole cost must be included). AEMO also raised a concern with the requirement that funds moving between 'Participants' are to be treated as a wealth transfer that cannot affect the calculation of costs or market benefits under the ISP CBA. (AEMO, p. 3) ENA recommends further guidance on what would be sufficient evidence of committed funds (e.g. whether a government announcement is sufficient or whether there needs to be committed funds). (ENA, p. 7)	AEMO could consider generator contributions in presenting information on distributional effects. We are monitoring the ESB's REZ work, which is still under development. We note ENA's recommendation about committed funds and have made a minor change to the CBA guidelines. The draft CBA guidelines specified that AEMO is required to consider external funding contributions when AEMO is certain these funds are committed. The CBA guidelines now allow AEMO to consider these funds when it expects these funds to become committed. If AEMO anticipates a funding commitment that does not occur, AEMO must consider whether a subsequent ISP update is required.
Option value	ENA considered greater clarity is required on the assessment of staged ISP projects and staged RIT–T projects, and the interaction with AEMO's feedback loop for automatic contingent project applications. It suggested the final CBA guidelines should provide some worked examples on this point. (ENA, p. 4-5) TasNetworks welcomed the importance placed on considering option value in the draft CBA guidelines. However, it	See 'Project staging, option value and worked examples' under Table 9 for a response to these submissions. The CBA guidelines provide AEMO with flexibility to incorporate staging into single ISP projects or multiple ISP projects. Further, they require AEMO to consider facilitating TNSPs to explore staging in the RIT–Ts. In any case, we disagree with Snowy Hydro's view. Option value is often created by staging a project in

	recommended we include guidance on 'shovel ready' projects. (TN, p. 2) Snowy Hydro considered the draft CBA guidelines suggest staging would involve separating actionable ISP projects into multiple ISP projects, where each stage is considered as a stand-alone project, and required to be separately assessed. It considered this would impact the timing of projects, and create a risk that the benefits and costs of the project could be diluted. (Snowy, p. 4)	a development path, but can also be created by changing the timing of projects in a development path (including deferral and acceleration) where this creates flexibility for other projects in that development path. Where option value is created through staging or deferral, this flexibility to respond to new information can increase net economic benefits and avoid consumers paying for underutilised or stranded assets.
Non-network options	TasNetworks and MEA Group supported our proposed guidance on non-network options before and after the draft ISP. MEA Group also considered early engagement and joint planning through the transmission planning process will play an increasingly important role in future ISPs. (TN, p. 2, MEA Group, p. 2) ENA recommended we remove or make discretionary part of our proposed guidance on non-network options. Specifically, the requirement for AEMO to provide a risk assessment (including the cause, magnitude and likelihood or the risk(s), and a cost comparison), where it rejects a non-network option proposal because of risk or uncertainty in the process under clause 5.22.12 of the NER. ENA considered the proposed requirement would impose material costs. (ENA, p. 9) MEU is concerned there is insufficient clarity on the identified need for actionable ISP projects and what non-network options are available to move straight from the ISP to a PADR. As such, it recommended an additional stage prior to the PADR. (MEU, p. 5) MEA Group considered it may be beneficial to establish a centralised means for which RIT–Ts are communicated, and responses received, for non-network proponents. MEA Group considered a centralised process would allow AEMO to keep abreast of non-network options and RIT–T proponents' activities and also help shape AEMO's views and understanding of non-	We have largely retained our draft guidance on non-network options before and after the draft ISP, and focus on early engagement. We note ENA's recommendation to remove or make discretionary the risk assessment of non-network option proposals AEMO rejects in its preliminary review. While we do not consider this requirement is too onerous for AEMO (see section 5.1 under 'Preliminary review of non-network options'), we have removed some of the specificity to provide AEMO with more discretion in how it conducts the assessment. We also consider that both non-network and network options carry operational risk, which means the risk assessment of non-network options should not be made in isolation. We further consider the assessment can be high level, and note that AEMO did not raise this issue in its submission. We consider MEU's concern relates primarily to the guidance on the identified need (see our response under 'Identified need' in this table). Further, our guidance on non-network options, including early engagement and AEMO's post-draft ISP assessment, should facilitate the consideration of non-network options in RIT–T applications. Our response to MEU's specific request to add an additional stage to the RIT–T is under 'RIT–T application process' in Table 9. In short, we do not consider the extra time this would take would be justified.

	network solutions. It considered this is particularly the case for rapidly developing technologies with evolving costs and benefits. (MEA Group, p. 2)	We note MEA Group's suggestion, but consider it more appropriate to be included and implemented through the NER than the guidelines.
ISP / RIT–T alignment	ENA, TasNetworks and Hydro Tasmania supported our proposed approach to achieving alignment between the ISP and RIT–T for actionable ISP projects, through allowing AEMO to reflect its approach in selecting the optimal development path by specifying the identified need and scenarios for the RIT–T. TasNetworks noted there will likely be some issues in the initial application. (ENA, p. 3, 10, Hydro Tas, p. 2, TN, p. 2) TasNetworks also considered our proposed approach to achieving alignment between the ISP and RIT–T is unavoidably complex, and supported worked examples being included in the CBA guidelines to assist understanding of the expectations. (TN, p. 2) Snowy Hydro did not support our proposed approach to achieving alignment between the ISP and RIT–T for actionable ISP projects. Snowy Hydro considered it has the potential to create misalignment between the ISP and the RIT–T, is inconsistent with the purpose of the ISP, and will perpetuate the current model of incremental planning which will not serve the long term strategic interests of the NEM. Snowy Hydro considered this is because our approach applies the same cost-benefit test to the RIT–T for actionable ISP projects as the existing RIT–T for non-ISP projects, which does not allow TNSPs to apply the same 'least regret' approach as AEMO in preparing the ISP. (Snowy, p. 2) Similarly, AEMO has expressed concerns about ISP / RIT–T alignment. AEMO considered if the ISP identifies that a transmission solution is the best way to address these risks, it is crucial that requirements for the ISP and RIT–T as set out in the CBA guidelines are aligned and allow RIT–Ts to satisfy regulatory requirements. It considered the collective effort of stakeholders	Given most stakeholders supported or have not commented on our approach to ISP / RIT–T alignment in the draft CBA guidelines, we have not changed our approach for the final guidelines. We do not consider our approach will lead to misalignment between the ISP and RIT–T for actionable ISP projects, as Snowy Hydro has suggested. We apply standard CBA guidance for both the ISP and RIT–T application based on best practice economic principles. What differs is the approach to selecting an optimal development path in an ISP, and a preferred option in a RIT–T application. While we have retained a risk-neutral framework for the RIT–T, our approach ensures ISP / RIT–T alignment even if AEMO adopts a risk averse approach to selecting an optimal development path in an ISP. This is because we allow AEMO to reference risk in the identified need and direct RIT–T proponents to explore specific ISP scenarios that reflect AEMO's approach to risk. If the RIT–T CBA is only able to explore scenarios that contain the risks AEMO prioritises under a risk averse approach, it will not be able to misalign. An extreme example of this is if AEMO directs only one scenario to a RIT–T proponent that contains all the risks it seeks to mitigate under a risk averse approach. Then the RIT–T proponent must provide 100 per cent weight to that scenario in selecting its preferred option. In response to AEMO's concern, we do not consider it is appropriate to restrict the technology of the credible options that can be considered in applying the RIT–T to actionable ISP projects. Even if AEMO identifies a transmission candidate ISP option, it is very important that non-network option proponents be given the opportunity to provide credible non-network option alternatives for consideration in a RIT–T application. This is

	and AEMO in developing the ISP are ultimately undermined if an investment proposed in the ISP faces difficulties in satisfying RIT–T requirements, even where ISP and RIT–T inputs and assumptions are consistent. AEMO also raised a concern that if it introduces new scenarios after the draft ISP, the current CBA guidelines would restrict RIT–T proponents from considering these important risks as part of their RIT–T CBA maximisation. It considered that in the future, even this will not be possible under the draft guidelines unless the plethora of derivative 'scenarios' have been consulted on at the very beginning of the ISP process and included in the IASR. (AEMO, p. 2-3)	already mandated in the NER through the post-draft ISP process for inviting non-network option proposals (clause 5.22.12). Under this clause, RIT–T proponents must assess the non-network options AEMO identifies as meeting, or reasonably likely to meet, the relevant identified need as one of the credible options. We also consider it is important for RIT–T proponents to perform their scenario analysis based on AEMO-specified scenarios from the IASR. These are identified and developed through a robust consultation process, which can be undermined through the creation of new scenarios at a later stage without the same opportunities for stakeholders to engage and provide feedback. However, we recognise the trade-off between robust consultation and up-to-date inputs. As such, the FBPG provide a process where the IASR can be updated to incorporate changes in market data and associated forecasts.
Identified need	ERM agreed that the identified need is the reason why an investment in the network is needed. It is also pleased that the draft CBA guidelines ask AEMO to link the identified needs for actionable ISP projects to consumer benefits. (ERM, p. 2) MEU considered the CBA guidelines need to provide clarity on what form the identified need must be presented in (MEU, p. 2-3): • MEU does not consider AEMO has clearly identified the need [for VNI West], which makes providing sensible comparison and options for non-network solutions quite difficult. • MEU considered that a clearly identified need must be more specific in what additional capacity is considered necessary to address the needs of consumers. • MEU considered the CBA guidelines need to be more specific as to what constitutes the "identified need" and for this to be detailed in more firm quantitative terms that address the needs	We acknowledge MEU's views on the identified need. However, we do not consider it appropriate to require AEMO to provide specific capacities in describing the identified need for actionable ISP projects. This is because our guidance in this area is principles-based, and seeks to strike a balance between an identified need that is general enough to avoid bias towards a particular solution, but specific enough to be consistent with the optimal development path and useful to proponents of alternative credible options. As such, we consider the principle in the draft CBA guidelines to facilitate 'RIT–T proponents to explore different credible options (including non-network options) in applying the RIT–T' addresses MEU's concern. We have also responded to MEU's concern by extending the worked example on the identified need in the CBA guidelines, to ensure it covers the key nuances around describing the identified need in a meaningful and useful way.

	of the consumer which will fund the augmentation, and provide a more explicit requirement such as “1000 MW increased capacity for southward flow to maintain reliability of supply to consumers in Victoria”.	
Feedback loop	ENA recommended refining the draft guidance provided to AEMO on the feedback loop (ENA, p. 17): • ENA did not support the need to conduct 'more intensive modelling and scenario analysis' the greater the cost difference between the RIT–T option and ISP candidate option. It considered the assumptions and scenarios considered in the ISP should be broad enough to reflect the reasonable range of differences in outcomes, and so should not need to be re-evaluated at the feedback loop stage. It also considered AEMO's selection of the optimal development path may not draw on a wide range of scenarios and the feedback loop should not extend to become a re-evaluation of AEMO's ISP decision on the optimal development path, but, a re-application of the same decision making approach. • ENA questioned the guidance on AEMO considering the costs of changing the optimal development path to accommodate the preferred RIT–T option. ENA considered it important that any assessment of the costs of changing the optimal development path focus on incremental forward looking costs (since any costs already incurred are sunk). • ENA considered the CBA guidelines could note that the AEMO feedback loop is not intended to assess the technical characteristics of the preferred option.	We have refined the draft guidance on the feedback loop to increase clarity and reduce duplication. The draft guidance that ENA refers to is intended to allow AEMO to perform the feedback loop in a way that is fit for purpose. They are materiality considerations that allow the intensity of the re-modelling to be scaled based on the difference in costs and/or market benefits between the RIT–T preferred option and the ISP candidate option. The draft guidance does not require any additional scenario analysis beyond what was performed in the relevant ISP. At most it requires a re-application of the same scenario analysis and decision making approach, as noted by ENA. We were also mindful of the resource costs associated with performing additional ISP modelling runs, which is why we had included it as another materiality consideration in the draft CBA guidelines. We consider that while the feedback loop should consider the nature of the preferred option, it is not intended to re-assess the technical characteristics of the preferred option. Under NER clause 5.16A.5(b), AEMO is required to confirm that the preferred option: • addresses the relevant identified need, and • aligns with the optimal development path (in most recent ISP). We have not provided guidance for AEMO in checking whether the RIT–T preferred option addresses the relevant identified need.
CBA methodology	Spark considered additional clarity should be provided in the CBA guidelines by confirming net benefits can be assessed over the full	We have not changed the draft CBA guidelines in response to these submissions.

economic life of projects and calculated by adopting the low discount rate applying to regulated TNSPs. (Spark, p. 1)

Spark considered the ISP CBA should include broader social benefits, such as secondary effects on the economy and desirable lower emission outcomes. Spark supports embedding the value of energy infrastructure investment to the economy, society and future sustainability in decision making processes. (Spark, p. 1)

The CBA guidelines do not dictate how AEMO should estimate costs and market benefits, but require AEMO to present its present value calculations and assumptions for costs and market benefits, and explain its rationale. In our explanatory statement to the draft guidelines, we explained that the present value of total costs and benefits for an investment project is typically calculated using the stream of cash flows as they are expected to be incurred over the life of the asset(s). However, where projects with different asset lives are being assessed, different methods can be used to allow for direct comparison of development paths. Any method used will make implicit assumptions about the costs (or benefits) beyond the asset life and/or the planning horizon (or modelling period).

Similarly, the CBA guidelines do not dictate which discount rate(s) AEMO should use, so long as it is appropriate for the analysis of private enterprise investment in the electricity sector across the NEM and consistent with the cash flows being discounted. However, the guidelines do provide discretionary guidance recommending that the lower boundary should be the regulated cost of capital.

We have maintained a market-wide test for the CBA guidelines, which is required under the NER.[96] This considers costs and benefits to all those who produce, consume and transport electricity in the market. It does not consider broader social or economy-wide costs and benefits. If policy makers consider there are broader benefits to an ISP project(s) in a development path, they can provide funding contributions consistent with those benefits to increase the net economic benefits of the ISP project(s) in the market-wide CBA. This effectively allows non-NEM benefits

96 NER, clause 5.15A.1(c) for the RIT–T, and market benefit classes specified in NER, clause 5.15A.2(b)(4). NER 5.22.10(c) then applies the same market benefit classes for the ISP, and NER, clause 5.15A.3(b)(4) aligns the RIT–T for actionable ISP projects to the ISP.

		to be captured in the analysis, whilst ensuring that electricity customers only pay for efficient expenditure associated with their electricity supply.
Committed ISP projects	The ENA considered there should be clearer guidance around when an actionable ISP project is considered committed. The ENA recommended an ISP project be considered committed once the AER has made a contingent project application decision, as this should be sufficient to signal commitment. The ENA considered the current definition for committed projects in the RIT–T instrument are currently applied to determine when generation projects are considered committed, which is not fit-for-purpose for ISP projects. (ENA, 3, 5, 6-7)	We have not changed the definition of committed project from the draft CBA guidelines. This definition is consistent with the RIT–T instrument and provides useful and practical criteria that signify project commitment. We consider these criteria apply equally to transmission and generation investment projects, and it is important to have a consistent definition across different technologies / types of investment projects. Further, actionable ISP projects may not always be regulated transmission investments.
Cost and risk allocation	MEU and PIAC raised issues regarding cost and risk allocation of ISP projects, particularly where benefits are shared between consumers and generators, or consumers across different regions. • MEU considered that ISP projects with a need that provides access for new generation should be funded by generators which will benefit from the augmentation. (MEU, p. 3) • PIAC considered there are a number of unique characteristics and challenges of ISP projects that are not present in other transmission projects such as more complicated cost-, risk- and benefit-sharing across multiple regions; and new or existing generators being the direct beneficiaries, rather than consumers. These may require changes to the current risk and cost allocation framework for ISP projects. (PIAC, p. 2)	We have not changed the draft CBA guidelines in response to these submissions. These issues are outside the scope of our ISP guidelines, which consider the ISP and RIT–T processes only. However, we consider our guidance requiring AEMO to present information on key distributional effects can provide a useful input for decision makers who are responsible for risk and cost allocation policies.
Incremental net economic benefits of ISP projects	MEU considered the CBA guidelines must have a process for ensuring each actionable ISP project in a given development path provides a positive contribution to the net economic benefit of the development path as a whole (i.e. has a positive incremental net	We have not made any changes to the draft guidance on the net economic benefits of ISP projects within development paths. The ISP performs its CBA at a development path level. However,

	economic benefit, not duplicated by another ISP project in the development path). MEU considered (MEU, p. 3-4): • To test the net benefit of each element of the group of actionable ISP projects, the ISP process excludes one of the elements to identify what the net benefit remaining is. This new net benefit is subtracted from the total net benefit and so provides a net benefit for the element removed – this process is then used to identify which is the best option for each element. This process explained by the VNI West team provides certainty that the benefits claimed by one element of the ISP are not also claimed by another element of the ISP. • The approach implicit in the draft guideline develops the best net benefit for each element but not necessarily for the group of the projects that work together. The CBA guidelines must embed this process for all ISP projects so that it underpins the development of each individual element as part of the ISP rather than the individual project being assessed in isolation.	we consider it is very important that: • The ISP co-optimises across a range of different transmission, generation and other non-network options in developing a whole-of-system plan. • Market benefits are not double counted across ISP projects within a development path. • Each ISP project within a given development path makes a positive contribution to the net economic benefit of the development path (under AEMO's decision making approach). Otherwise removing that project would increase the net economic benefit of the entire development path. Our CBA guidelines provide for this. Specifically, they: • Require AEMO to consider as many different investment options as possible in running its co-optimisation process to select development paths. • Require AEMO to not double count any costs or market benefits across ISP projects in a development path. • Provide an example cross check AEMO could use to check each project in its optimal development path makes a positive contribution to the net economic benefit of the optimal development path (under AEMO's decision making approach). If a project fails this, it would be unable to satisfy the RIT–T.
Project names	ECA encouraged AEMO and AER to develop and adopt a consistent naming convention to describe all network and non-network projects considered as part of the ISP development, and that this list of projects be published alongside the draft and final ISPs and that projects must retain the same identifier. (ECA, p. 5)	We are not responsible for the naming of ISP projects. However, we acknowledge ECA's concern. As such, we have included guidance to encourage consistent project naming across the ISP and RIT–T processes.

RIT–T guidance and requirements

Table 9 summarises and responds to submissions relating to how the RIT–T instrument and CBA guidelines/RIT–T application guidelines apply to RIT–T applications for actionable ISP projects and non-ISP projects.

Table 9: Submissions relevant to the RIT–T

Broad issue	Summary	Proposed response
Use of ISP parameters	Limiting 'demonstrable reasons' to depart from ISP parameters to material changes in circumstances may move beyond the policy intent. This may also exclude valid departures where there has been a change in the understanding of the facts, or of their implications, that prevailed at the time of the last ISP. EnergyAustralia suggested reconsidering the wording to rest on AEMO's intent or an expectation that a matter will be reflected in an upcoming ISP (EnergyAustralia, pp. 1-2). The discretion for TNSPs to adopt alternative assumptions where there has been a material change in circumstances remains important (ENA, p. 10). TNSPs should be required to adopt the most recent regulated rate of return as the lower bound discount rate, where this is more up-to-date information than what is in the IASR (ENA, p. 18).	Minor change to CBA guidelines and RIT–T application guidelines. We have incorporated EnergyAustralia's suggestion, but have added that where the material change is prone to subjectivity, the RIT–T proponent may choose to attain written confirmation of the change from AEMO. We agree that departures from ISP parameters should reflect the expectation that the next ISP would reflect that departure. Discretion maintained, as supported by ENA. We have also added that the RIT–T proponent may choose to request written confirmation from AEMO where the change is subjective (e.g. a material change in the understanding of the facts). No change. There would be little value in including ENA's suggested requirement given the regulated rate of return only applies for the discount rate's lower bound and the regulated rate of return is unlikely to materially change over two years (given the trailing average return on debt).
Use of ISP modelling	Supported the confirmation that AEMO's generation modelling can be adopted for RIT–T applications on actionable ISP projects relating to REZ developments (ENA, pp. 4, 11). Supported including other ISP projects in the optimal development path in the base case for the RIT–T assessment apart from the project being assessed (ENA, p. 10).	No change required, but confirmation provided for ENA. Consistent with NER clause 5.15A.3(b)(7)(vi), these RIT–T proponents must adopt market modelling from the ISP, in so far as practicable. This applies to all actionable ISP projects, whether or not they relate to REZ developments. No change required. The CBA guidelines reflect ENA's supported

		approach of 'taking one out at a time'.
Project staging, option value and worked examples	The draft CBA guidelines suggest that staging would involve separating actionable ISP projects into multiple ISP projects. This would affect the timing of projects. TNSPs should be able to stage their projects as part of the RIT–T application (Snowy Hydro, p. 4). TasNetworks supported worked examples to assist in understanding how the RIT–T will be applied to actionable ISP projects, as this alignment is unavoidably complex (TasNetworks, p. 2). ENA supported worked examples on staging and has suggested worked examples to demonstrate how this will work and interact with the feedback loop and contingent project application process (ENA, pp. 3-4, 12-15). TasNetworks welcomed the guidance on considering option value and suggested the CBA guidelines confirm that AEMO should consider 'shovel ready' projects in assessing option value (TasNetworks, p. 2).	No change required. The CBA guidelines allow for both forms of staging, which Snowy Hydro supported (that is, at the ISP level and at the RIT–T level). Examples introduced. We have used the structure of ENA's first worked example to extend example 10 from the draft CBA guidelines. Following ENA's suggestion, we now detail how staged projects developed through the RIT–T will progress through the ISP framework. We have also introduced a worked example based on ENA's second worked example. However, we have adjusted this example to be based on a RIT–T with multiple relevant scenarios (given we expect that multiple scenarios will be relevant where option value is a material market benefit). We have introduced a worked example involving early works and option value, providing the additional guidance that TasNetworks requested. We have maintained our draft guidance that an ISP project with staging considerations could include undertaking early works. This concept is equivalent to taking a project to a 'shovel ready' state.
Non-ISP RIT–T applications	ISP scenarios should only be used where wholesale market outcomes are material to the outcomes, and where undertaking market modelling is appropriate. ISP scenarios will not be relevant for many replacement expenditure and reliability corrective action RIT–T applications (TasNetworks, p. 2; ENA, p. 4). TNSPs should not have to take into account factors such as electricity pricing reports, and polices related to features of the NEM, where they have no relevance for the RIT–T outcome (ENA, p. 19). ENA requested confirmation that TNSPs can adopt the ISP's generation modelling outcomes for non-ISP RIT–T assessments,	Change to the RIT–T instrument and application guidelines to incorporate TasNetworks' and ENA's suggestion. RIT–T proponents are only required to adopt ISP scenarios for non-ISP projects where relevant. While the draft guidelines intended to turn RIT–T proponents' minds to the ISP scenarios for non-ISP projects, we agree that the drafting may have created a burden beyond its intended purpose. Minor change to RIT–T application guidelines to reflect ENA's suggestion. We have clarified that RIT–T proponents should be conscious of these factors 'where relevant'. Confirmation provided for ENA. The RIT–T instrument allows

	which will assist in considering REZ developments (ENA, p. 11).	RIT–T proponents to adopt market development modelling from the ISP for RIT–T projects that are not actionable ISP projects.
AER preferred option assessments	ENA noted the reference to the continuing role of AER preferred option assessments as part of contingent project triggers. ENA considered this was at odds with its understanding of the ESB's intent when removing NER clause 5.16.6 and risks continuing regulatory costs and delays. The AER should review whether this guidance is necessary (ENA, pp. 19-20).	Minor change to clarify that these assessments may occur for non-ISP projects, but will not be under NER clause 5.16.6 (which is now removed). We have still included guidance on 'requesting an AER determination on the RIT–T application' to inform TNSPs of how we would approach such assessments. TNSPs still have the discretion to propose contingent project triggers, which we would expect to include an AER determination on the RIT–T application (particularly given there is no AEMO 'feedback loop' for non-ISP projects). This guidance does not impose obligations on TNSPs.
Distributional impacts	EnergyAustralia supported outlining distributional impacts of investment pathways and considered this should be a binding requirement on RIT–T proponents. While this may not be relevant for overall investment decisions, this will likely be critical for stakeholders, including under future cost sharing arranges that the ESB will examine (EnergyAustralia, p. 2). While identifying distributional effects is appropriate and relevant for the strategic NEM-wide focus of the ISP, it would not be appropriate to require this analysis for each subsequent RIT–T assessment (ENA, p. 8).	Minor change to the CBA guidelines. Where we require RIT–T proponents to provide data to stakeholders, we have added that, in doing so, the RIT–T proponent must have regard to how it can present information in line with stakeholder preferences. If there is strong stakeholder interest in the distributional effects of specific RIT–T projects, the RIT–T proponent should turn its mind to how it might present this information. Otherwise, while AEMO is required to present information on key distributional effects, we have not extended this requirement to RIT–T proponents. The costs of RIT–T proponents performing this potentially resource- and assumptions-heavy task will unlikely outweigh the benefits given we already require AEMO to present distributional effects.
RIT–T alignment with the ISP and streamlining	Supported the AER's approach to ISP/RIT–T alignment (Origin Energy, p. 1; ENA, p. 3; Hydro Tasmania, p. 2). This includes the intention for AEMO to specify and explain which scenario/s are relevant for RIT–T applications associated with actionable ISP projects (Hydro Tasmania, p. 2). Also supported the resulting streamlined RIT–T process/approach to eliminating duplication (ENA, p. 3, Hydro Tasmania, p. 2). Seeking to embed the existing RIT–T CBA is inconsistent with the	No change. We have maintained our approach to ISP/RIT–T alignment, and streamlining the RIT–T process. No change. We do not agree with Snowy Hydro's view and note that by including other actionable ISP projects in the base case, the RIT–T will be exploring the net economic benefits that specific projects add to the optimised system-wide solution (that is, the optimal development path). We consider alignment can still be achieved through how AEMO specifies the identified need and

	purpose of the ISP, which is to move beyond the incremental approach to transmission planning (Snowy Hydro, p. 1). The proposed approach could create misalignment as it does not allow TNSPs to apply the same 'least regrets' approach as AEMO in preparing the ISP (Snowy Hydro, pp. 2-4). The NER do not prevent TNSPs from adopting a 'least regrets' approach in their RIT–T applications (Snowy Hydro, p. 6).	directs RIT–T proponents to consider specific scenarios. The NER require the preferred option in the RIT–T to maximise market-wide net economic benefits, which is incompatible with 'least worst regrets', which is based on minimising regrets rather than maximising net benefits.
Market benefits	Submissions from Snowy Hydro (pp. 3-4) and Hydro Tasmania (p. 2) discussed the consideration of market benefits in the ISP and RIT–T.	A summary of and response to these submissions is covered under 'market benefits' in Table 8.
Sensitivity testing	If AEMO directs a TNSP to use a particular scenario or take a risk averse approach, the AER should require TNSPs to include a sensitivity for a risk-neutral approach so stakeholders can understand the implications of using a more conservative methodology for individual projects (Origin Energy, p. 1). The AER should clarify that sensitivity testing should focus on variables considered at the RIT–T stage, rather than broader matters concerning NEM development, which are better explored through ISP sensitivities (ENA, p. 3). ENA suggested reflecting the principles that sensitivity analysis should be proportionate and build on the ISP analysis, which should be considered when considering risks raised in stakeholder submissions (ENA, p. 11).	No change. The incremental transparency benefit of Origin Energy's suggested requirement would unlikely outweigh the time and resource costs involved, which would require the RIT–T proponent to duplicate the ISP analysis. A preferable alternative would be for AEMO to publish each actionable ISP project's incremental net benefit to the optimal development path under the risk neutral approach. AEMO has discretion over whether to provide this information. Minor change. Neither the draft nor final CBA guidelines impose requirements on RIT–T proponents for sensitivity testing. To provide clarity for ENA, we have added that sensitivity testing around particular events only concerns where this is relevant to the particulars of the RIT–T assessment. While RIT–T proponents must still have regard to any relevant risks identified in submissions, RIT–T proponents can, after having regard to those risks, give them no weight. We have added that, in doing this, RIT–T proponents have discretion to consider whether additional sensitivity testing would build on the ISP and be proportionate and relevant to the RIT–T assessment.
RIT–T application process	MEU proposed an additional stage between the ISP (or RIT–T consultation report) and the RIT–T draft report to clearly define	No change. We have not introduced MEU's suggestion for an additional stage as (1) stages in the RIT–T procedures are

	what the augmentation is to provide and what credible non-network options are available (MEU, p. 5). Where TNSPs are exempt from publishing a draft report for ISP projects that address reliability corrective action, TNSPs should not be required to engage with stakeholders to address relevant concerns in the conclusions report given engagement would have already occurred via the ISP (ENA, p. 11).	prescribed in the NER (clauses 5.16.4 and 5.16A.4), and (2) the NER intend for this information to be provided at the ISP/consultation report stage. See NER clauses 5.16.4(b)(1), (5) and 5.22.6(a)(6)(iv)-(v). No change necessary. We confirm for ENA that neither the draft, nor the final CBA guidelines include this requirement.
Treatment of funding contributions	ENA's submission covered the treatment of external contributions in both RIT–T applications and the ISP.	A summary of, and response to ENA's submission is included under 'funding contributions' in Table 8.
Calculating terminal value	ENA disagreed with requiring operating and maintenance costs to be incorporated into the calculation of terminal value where the modelling period is shorter than the asset life of the credible option. This is a new requirement that only features in the RIT–T section for actionable ISP projects. This reflects a misunderstanding of the role of terminal values, which is to apportion capital costs between the assessment period and the remaining period of the asset's life (ENA, p. 18).	Minor change. The CBA guidelines now clarify that this requirement stems from the RIT–T instrument, which states that the TNSP must quantify 'operating maintenance costs in respect of the operating life of the credible option'.[97] This highlights that we have not introduced a requirement, but have provided guidance on a pre-existing RIT–T requirement. We have also added that the RIT–T proponent is required to include these costs '(if any)', to recognise that there may be credible options where all the operating and maintenance costs are incurred before the end of the modelling period. We have also included similar guidance in corresponding sections of the RIT–T application guidelines for clarity. We do not agree with ENA's view on the role of terminal values. Terminal values are important for capturing the costs and benefits over the life of the project where the modelling period is shorter than the asset life.
Compliance reporting	ENA sought confirmation that the RIT–T compliance report may be a table, potentially an appendix to the conclusions report (ENA,	Confirmation provided. AEMO and RIT–T proponents have this discretion.

97 AER, *Final: RIT–T*, August 2020, para (5)(b). This historic version of the RIT–T instrument also included this requirement. See AER, *Final: RIT–T*, June 2010, para (2)(b).

	p. 18). ENA sought confirmation that there is no expectation that the AER will formally approve the compliance report before the TNSP starts the contingent project application process (ENA, p. 18).	Clarity provided. There is no formal approval process for compliance reports. Rather, we have introduced this requirement to assist transparency and our monitoring and dispute resolution functions.
Capex updates	The AER should explain what happens as capex estimates are revised, and what will occur if actual capex exceeds expected capex provided for in the contingent project decision. Such a statement would guide TNSPs to ensure that they implement sound capex development practices (MEU, p. 4).	Explanation provided. The capex allowance provided in the contingent project determination will increase the TNSP's capex allowance by that amount. The TNSP may overspend or underspend its capex allowance, resulting in a penalty or reward under the capex sharing scheme. If a project overspend results in the TNSP overspending its aggregate capex allowance, there is scope for the AER to conduct an ex-post review. If such a review found that overspend inefficient, the AER could prevent that capex from being rolled into the regulatory asset base.
Ex-post evaluation	The AER should require TNSPs to recalculate the assessed benefits some period after each project is complete to test the accuracy of forecasts. This would not justify revisiting decisions or revaluing the regulatory asset base, but would provide feedback to improve forecasting benefits (MEU, p. 5).	No change. We do not consider it would be appropriate to introduce this requirement on TNSPs. This analysis would have minimal value unless an independent party undertook it (due to the assumptions required around forming the counterfactual). While an independent evaluation could provide some beneficial feedback, we are not convinced that this warrants the costs involved, particularly given ex-ante efficient investment decisions can differ from what is ex-post efficient.

Forecasting best practice guidelines

Table 10 summarises and responds to submissions that relate to the FBPG. The FBPG cover how AEMO should develop, consult on and publish its inputs and forecasts underpinning the ISP and reliability forecasts. The FPBG also set out the consultation procedures for AEMO to follow when developing the IASR and ISP methodology.

Table 10: Submissions relevant to the FBPG

Broad issue	Summary of relevant submission/s	Proposed response
Broad comments	Broadly supported the draft FBPG (ENA, p. 5; EUAA, p. 2). ECA appreciated the factors that AEMO must have regard to when developing forecasting practices and processes and considered the FBPG had moved in a positive direction (ECA, p. 3). ERM Power also considered the classification for binding elements was appropriate and should not be softened (pp. 1-2).	Minor changes. We note the broad support of the draft FBPG. The final FBPG has included incremental changes, without softening the binding elements.
Prescribed consultation process	ECA (p. 3) appreciated the clarity provided around the two different types of consultation processes and suggested: • Reconsidering the definition of Consulted Persons as it is questionable how parties can indicate they are interested parties if AEMO is only required to give notice to Consulted Persons. This goes to ECA's point on needing to clarify how consumer representatives register to participate in ISP development (p. 1). • Amending the 'single stage process' so it does not preclude AEMO from issuing reports or calling for submissions before the cycle ending with the published report, given the development of forecasts can be iterative. • Redrafting paragraph (b) of Appendix B to state 'following the conclusion of all meetings'.	• Minor change. We have amended the definition of 'Consulted Persons' to include 'any other persons who register or express interest, either in response to a public notice calling for expressions of interest or through having previously participated in similar consultations'. • No change required. The single stage process does not preclude AEMO from issuing additional reports or calling for additional submissions. Moreover, the FBPG accommodates iterative updates by allowing AEMO to update the IASR in response to planned data updates (and consulting with the forecasting reference group, where applicable) or submissions on the draft ISP. • Minor change. We have reflected the drafting suggestion. We also applied this to paragraph (e) of Appendix A, but added '(if any)' to reflect that meetings may not occur.

Facilitating active AER involvement	Agreed that AEMO should facilitate active AER involvement. Active AER involvement/oversight should also apply to internal development and stakeholder engagement, rather than just the ISP outputs (PIAC, p. 3). EUAA looked forward to engaging with the AER throughout the ISP process using the issues register and not having to wait for milestones (EUAA, p. 2).	Minor change. As per PIAC's suggestion, we have further clarified in section 2.2 of the FBPG that active AER involvement is not limited to ISP outputs. Addition. To clarify the role of the issues register for EUAA, we have added that facilitating AER involvement will assist us in maintaining a public issues register to track and report on compliance issues that stakeholders, RIT–T proponents, AEMO, and we identify concerning binding provisions of the CBA guidelines and FBPG. Facilitating active AER involvement will minimise scope for misunderstandings and allow us to respond to any concerns expeditiously.
Role of related AEMO consultations and documents	The AER may wish to clarify the role of AEMO publications that the NER do not prescribe but have a bearing on the ISP analysis. This will clarify if consultation on the Renewable Integration Study or ad hoc Insight papers will form part of AEMO's ISP consultation requirements, including obligations to consider or respond to matters raised by stakeholders (EnergyAustralia, p. 2). AEMO's forecasting reference group is operating well from a consumer engagement perspective and ECA would like to ensure the NER and ISP guidelines build on that positive practice (ECA, p. 3).	No change in response to EnergyAustralia's suggestion. The FBPG prescribe consultation procedures for AEMO's publications that make up its 'Forecasting Approach'. Except for the ISP-related publications in the relevant NER clauses, the Forecasting Approach will have the strongest bearing on the ISP analysis. For completeness, AEMO's Forecasting Approach is its set of detailed forecasting methodologies that it may maintain as a set of specialised documents. No change required in response to ECA's point. The FBPG provide AEMO with the flexibility to continue to draw upon its forecasting reference group and similar initiatives when developing forecasts in an iterative fashion.
Consultation on the ISP	AEMO should consult on its CBA methodology, including its choice of risk-averse approach, at the IASR stage of each ISP iteration (Origin Energy, p. 1). While the consultation principles reference the AER's consumer engagement guideline, best practice network consumer engagement has progressed since 2013 (EUAA, p. 2). Best practice recognises the importance of long-lasting	No change in response to Origin Energy's suggestion. Section 2.4 of the FBPG provides consultation requirements for AEMO's ISP methodology (which AEMO is required to review at least every four years). The ISP methodology sets out AEMO's CBA and modelling methodology for the ISP (NER clause 5.22.8(d)), which should include the various approaches that AEMO may adopt to select the optimal development path, and the factors that will drive which approach (or combination of approaches) it will

	relationships with consumers to improve their skills and understanding of the information provided. Best practice also entails applying the IAP2 spectrum in an explicit way (i.e. clarifying when consultations aim to inform, involve or collaborate) (EUAA, p. 3). Where AEMO has flexibility, the AER's guidelines should ensure appropriate engagement is undertaken and decisions are clear and accountable for stakeholders (Hydro Tasmania, p. 2). The ISP's success will rest heavily on AEMO meaningfully bringing stakeholders into the process. This approach must incorporate a sophisticated view about how energy consumers use energy and engage with new services. AEMO will not be able to adopt a fixed view about how it engages, but will need to work towards contemporary models of transition design. This could mean providing a forum for stakeholders to develop project options and re-frame problems from a consumer point of view where justified (ECA, p. 2). AEMO should be required to follow the consultation principles in the FBPG, rather than classifying this as a consideration (EUAA, p. 2).	use. AEMO will apply this component of its ISP methodology at the draft ISP stage (rather than at the IASR stage) because this is the first stage of the ISP development process where AEMO will put an optimal development path forward. At that point, AEMO will explain and consult on how it applied its ISP methodology to choose the optimal development path (which may entail drawing upon a risk averse approach). Minor change. Following EUAA's submission, we now clarify that AEMO must have regard to the most recent version of the AER's consumer engagement guideline. We have maintained this cross-reference so the FBPG remains relevant after the AER updates its consumer engagement guideline. Minor change to reflect EUAA's points in the context of building consumers' capacity and when applying the IAP2 spectrum. No change required. We agree with Hydro Tasmania, and consider the FBPG will achieve this objective. Minor addition. Following ECA's submission, the consultation principles now state that, when employing a range of engagement strategies, 'AEMO should be flexible about how engages with a view to meaningfully bring stakeholders into the process'. The FBPG continue to state that AEMO must consider how to engage meaningfully with stakeholders at all key stages of the ISP development process. No change in response to EUAA's suggestion. We have continued to classify these principles as 'binding considerations' given that many of these require subjective judgement. Moreover, these are also complemented by objective requirements under the consultation procedures.
Error correction loops	PIAC supported requiring AEMO to conduct holistic, periodic reviews and more discrete reviews of its forecasting and	No change. We acknowledge PIAC's and Hydro Tasmania's support of this element of the draft FBPG, which we have

	modelling. Doing so creates a feedback and error-correction loop that helps forecasts and models to remain accurate and embeds a process of continuous improvement (PIAC, p. 2). Hydro Tasmania also supported requiring AEMO to have regard to the performance of its previous forecasts against outcomes through post-period performance reviews (Hydro Tasmania, p. 2).	maintained in the final FBPG.
Reporting on uncertainty	AEMO should continue seeking how to convey the uncertain nature of its forecasts. Measures of confidence and certainty should be incorporated into the 'headline' messaging, as well as in more technical documents (PIAC, p. 3). AER should require AEMO to state the accuracy of capex assessments and benefits (for example, in terms of +/- %) and then test sensitivities around the stated accuracies (MEU, p. 4).	Addition to incorporate PIAC's suggestion. When developing its Forecasting Approach, AEMO must now consider how it can best explain and present its approach to reporting the uncertainties around forecasts, such as how measures of confidence and certainty will be communicated to stakeholders clearly and accessibly. Addition to incorporate MEU's suggestion. We have added that, sensitivity testing forecasts, 'can be achieved by stating the accuracy of forecasts (for example, the accuracy of forecast capital expenditure in terms of +/- %) and then using the stated accuracies as a basis to test sensitivities'.
Material changes in circumstances	The FBPG require action when there is a 'material' change in circumstances or impact on a forecast. If AEMO assesses whether a change is material, can stakeholders raise changes through the issues register that they think are material? If so, what process happens to judge whether AEMO should consider those changes? (EUAA, p. 3).	No change to the guidelines. Where the FBPG reference materiality, AEMO is able to use its reasonable judgement to determine materiality. Stakeholders can raise with AEMO any material changes in circumstances they identify. This may be through or outside of one of AEMO's formal consultation processes. If stakeholders are unsatisfied with the consideration that AEMO gives to that information, they may raise potential compliance issues for the AER's consideration through the issues register.

Appendix B: Glossary and shortened forms

This appendix sets out a glossary of key terms and list of shortened forms.

Glossary

Table 11 provides the description of key terms used in this explanatory statement.

Table 11: Key terms

Term	Description
Actionable ISP project	Defined in NER chapter 10 as a project: • that relates to a transmission asset or non-network option the purpose of which is to address an identified need specified in an ISP and which forms part of an optimal development path • for which a project assessment draft report is required to be published in the ISP that identifies that project.
Anticipated project	Anticipated project means a project which: • does not meet all of the criteria for a committed project; and • is in the process of meeting at least three of the criteria for a committed project (as listed in the 'committed project' definition below).
Base case	In a RIT–T application, a situation in which the *credible option* is not implemented by, or on behalf of the *RIT–T proponent.* *For a definition of the 'base case' development path in the ISP, see the definition for the 'counterfactual development path' below.*
Committed project	Committed project means a project that meets the following criteria: • the proponent has obtained all required planning consents, construction approvals and licenses, including completion and acceptance of any necessary environmental impact statement; • construction has either commenced or a firm commencement date has been set; • the proponent has purchased/settled/acquired land (or commenced legal proceedings to acquire land) for the purposes of construction; • contracts for supply and construction of the major components of the necessary plant and equipment (such as generators, turbines, boilers, transmission towers, conductors, terminal station equipment) have been finalised and executed, including

	any provisions for cancellation payments; and • the necessary financing arrangements, including any debt plans, have been finalised and contracts executed.
Consideration	A binding element of the CBA that AEMO must have regard to.
Costs	The present value of the direct costs of a credible option or development path. The classes of costs are set out in the NER (clause 5.15A.2(b)(8), 5.15A.3(b)(6), 5.22.8(d)).
Counterfactual development path	The status quo or base case that AEMO uses to compare the development paths in the ISP CBA.
Cross checks	Cross checks can inform the accuracy of an outcome by 'sense checking' it against information from other sources.
Credible option	Defined in NER clause 5.15.2(a) as being an option (or group of options) that: (1) addresses the identified need; (2) is (or are) commercially and technically feasible; and (3) can be implemented in sufficient time to meet the identified need, and is (or are) identified as a credible option in accordance with paragraphs (b) or (d) (as relevant).
Development path	Defined in NER clause 5.10.2 as a set of projects in an ISP that together address power system needs.
Discretionary element	A non-binding element of the CBA guidelines.
Distributional effects	Distributional effects consider the distribution of costs and market benefits of an optimal development path—that is, who receives the benefits and who pays the costs.
Forecasting Approach	AEMO's detailed forecasting processes, practices and methodologies that underpin the ISP, reliability forecasts and other relevant AEMO material. This approach includes the details set out the FBPG.
Forecasting best practice consultation procedures	The procedures set out in appendix A of the FBPG.
Future ISP project	Defined in NER clause 5.10.2 as a project: • that relates to a transmission asset or non-network option the purpose of which is to address an identified need specified in an ISP and which forms part of an optimal development path • that is forecast in the ISP that identifies the project, to be an actionable ISP project in the future.
Identified need	Defined in NER chapter 10 as the objective a network service provider or a group of network service providers seeks to achieve by investing in the network in accordance with the NER or an ISP.

ISP	Defined in NER chapter 10 as a plan developed and published by AEMO under rule 5.22 as amended by an ISP update from time to time. The ISP provides a whole of system plan for the efficient development of the power system that achieves power system needs. It identifies an optimal development path that contains ISP projects, some of which trigger the application of a RIT–T, or preparatory activities.
ISP candidate option	Defined in NER clause 5.10.2 as a credible option specified in the ISP that the RIT–T proponent must consider as part of a RIT–T for an actionable ISP project.
ISP development opportunity	Defined in NER clause 5.10.2 as a development identified in an ISP that does not relate to a transmission asset or non-network option and may include distribution assets, generation, storage projects or demand side developments that are consistent with the efficient development of the power system.
ISP parameters	Defined in NER clause 5.10.2 as, for an ISP project: • the inputs, assumptions and scenarios set out in the most recent IASR; • the other ISP projects associated with the optimal development path; and • any weightings specified as relevant to that project.
ISP project	Defined in NER clause 5.10.2 as an actionable ISP project, a future ISP project or an ISP development opportunity.
ISP update	Defined in NER chapter 10 as an update to an Integrated System Plan published by AEMO under NER clause 5.22.15.
Market benefits	The present value of the benefits of a credible option or development path, or a benefit to those who consume, produce and transport electricity in the market, that is, the change in producer plus consumer surplus. The classes of market benefits are set out in the NER (clause 5.15A.2(b)(4), 5.15A.3(b)(4), 5.22.8(c)).
Modelled project	Modelled project means a hypothetical project derived from market development modelling in the presence or absence (as applicable) of the relevant: • development path (for the ISP) • credible option (for a RIT–T application).
Net economic benefit	Net economic benefit equals the market benefits less costs.
Non-network option	Defined in NER chapter 10 as 'a means by which an *identified need* can be fully or partly addressed other than by a *network option*'.

	For avoidance of doubt, the AER interprets this definition to mean that non-network options:[98] • Involve 'non-network assets—that is, assets that are not used to convey or control the conveyance of electricity to customers, and that are not connection assets. For instance, non-network assets might include assets that customers use to reduce their demand for electricity, or assets on which expenditure is undertaken by a third party; or • Can also include options that involve some expenditure on a network asset, but not expenditure on network assets alone.
Optimal development path	Defined in NER chapter 10 as a development path identified by AEMO as the optimal development path in the most recent ISP in accordance with rule 5.22.
Other Party	Any other party than a Participant (where Participant is defined below).
Participant	A Registered Participant under clause 2.1 of the NER or any other party in their capacity as a consumer, producer or transporter of electricity in the market.
Preferred option	Defined in NER clause 5.15A.1(c) as the credible option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the 'market'.[99]
Preparatory activities	Defined in NER clause 5.10.2 as activities required to design and to investigate the costs and benefits of actionable ISP projects and if applicable, future ISP projects including: • (detailed engineering design; • route selection and easement assessment work; • (cost estimation based on engineering design and route selection; • preliminary assessment of environmental and planning approvals; and • council and stakeholder engagement.
Power system needs	The power system needs are, as defined in clause 5.22.3(a) of the NER: • the reliability standard; • power system security;

98 The AER provides the interpretation in AER, *Consultation paper: Demand management incentive scheme and innovation allowance mechanism,* January 2017, p. 20.

99 Where chapter 10 of the NER defines 'market' as any of the markets or exchanges described in the NER, for so long as the market or exchange is conducted by AEMO.

	• system standards; and • standards or technical requirements in Schedule 5.1 or in an applicable regulatory instrument.
Requirement	A binding element of the CBA guidelines that AEMO must achieve.
Risk neutral decision making approach	Risk neutral decision making approaches are based on expected value. That is, they weight different payoffs based on their likelihood of occurrence. In this context, this means weighting the net economic benefit of development paths in each scenario based on the likelihood, or relative likelihood, of the scenario occurring. Risk neutral decision making approaches prioritise transmission investment risks based on their likelihood of occurrence (with judgement used to assess likelihoods).
Risk averse decision making approach	Risk averse decision making approaches (implicitly or explicitly) weight different payoffs to reduce variability or the risk of a negative outcome occurring. In this context, this means (implicitly or explicitly) weighting the net economic benefit of development paths in each scenario in a way that mitigates particular risks. Risk averse approaches place a higher value on reducing the risk(s) of a negative outcome occurring than the likelihood of its occurrence. As such, a risk averse decision making approach uses judgement on risk tolerances to prioritise risks.
RIT–T	Defined in NER chapter 10 as the test developed and published by the AER in accordance with clauses 5.15A.1 and 5.16.2 as in force from time to time, and includes amendments made in accordance with clause 5.16.2. It is a CBA that assesses credible options to address an identified need, and identifies the credible option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the market (the preferred option).
Scenario analysis	Scenario analysis entails developing/describing a range of different scenarios and exploring how different development paths produce different market benefits across each scenarios. Through this, AEMO gains a comprehensive understanding of what states of the world could arise with and without each development path in place under different sets of external circumstances. Scenario analysis is one way to assess the risk or uncertainty of a given development path, focussing that associated with an unknown future market environment.
Scenario	Different future external market environments that are used in a CBA to assess and manage uncertainty about how the future will develop. They are based on variations to input variables and parameters that drive supply and demand conditions (for example, population growth, coal and gas prices, etc.).
Sensitivity testing	Sensitivity testing varies one or multiple inputs to test how robust the output of its CBA is to its input assumptions (for example,

	underlying plant operation assumptions).
Single stage process	the process set out in appendix B of the FBPG.
State of the world	A state of the world is a detailed description of all of the relevant market supply and demand characteristics and conditions likely to prevail to meet the power system needs if a development path proceeds in a given scenario. This includes generation, network and load development and operating requirements.

Shortened forms

Table 12 provides a list of shortened forms used in this explanatory statement.

Table 12: Shortened forms

Shortened form	Full form
actionable ISP project	as defined in the NER chapter 10
AEC	Australian Energy Council
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CBA	cost benefit analysis
COAG EC	The Council of Australian Governments Energy Council
conclusions report	project assessment conclusions report
consultation report	project specification consultation report
DER	distributed energy resources
draft report	project assessment draft report
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
ESB	Energy Security Board
ESOO	electricity statement of opportunities
EUAA	Energy Users Association of Australia
FBPG	forecasting best practice guidelines
GDP	Gross domestic product
IASR	Inputs, assumptions and scenarios report

ISP	Integrated System Plan
MCA	multi-criteria analysis
MEU	Major Energy Users
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
non-ISP projects	projects identified outside the ISP process
NNO	Non-network option
NTNDP	national transmission network development plan
Other Party	a party other than a Participant
other RIT–T projects	RIT–T projects that are not actionable ISP projects
Participant	a registered participant under the NER or any other party in their capacity as a consumer, producer or transporter of electricity in the market
PIAC	Public Interest Advocacy Centre
QFF	Queensland Farmers' Federation
REZ	renewable energy zone
RIT–D	regulatory investment test for distribution
RIT–T	regulatory investment test for transmission
RRO	Retailer Reliability Obligation
TAPR	Transmission annual planning report
TNSP	transmission network service provider
VCR	values of customer reliability