Final decision

Application guidelines for the regulatory investment tests

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AUSTRALIAN ENERGY REGULATOR

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Shortened forms

Shortened Form	Extended Form
ACCC	Australian Competition and Consumer Commission
AEC	Australian Energy Council
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ALARP	As Low As Reasonably Practicable
APR	annual planning report
augex	augmentation expenditure
BAU	business-as-usual
capex	capital expenditure
CCP	Consumer Challenge Panel
CEC	Clean Energy Council
COAG EC	Council of Australian Governments Energy Council
DAPR	distribution annual planning report
distribution business	distribution network service provider
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
ESB	Energy Security Board
final RIT report	a project assessment conclusions report under the RIT–T or a final project assessment report under the RIT–D
Finkel Review	the Commonwealth of Australia's independent review into the future security of the National Electricity Market
HILP events	high impact, low probability events
ISP	integrated system plan
NEL	National Electricity Law

NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
network business	network service provider — either a distribution or transmission network service provider
NTNDP	National Transmission Network Development Plan
Other Party	a party other than a Participant
Participant	a registered participant under the NER or any other party in their capacity as a consumer, producer or transporter of electricity in the relevant market
PIAC	Public Interest Advocacy Centre
preferred option	as defined in NER clause 5.16.1(b) and 5.17.1(b)
RAB	regulatory asset base
repex	replacement expenditure
repex rule change	the replacement expenditure planning arrangements rule change
REZ	renewable energy zone
the RIT guidelines	collectively, the application guidelines accompanying the regulatory investment test for distribution and transmission
RIT–D	regulatory investment test for distribution
RIT proponent	either a RIT–T proponent or a RIT–D proponent, as defined in chapter 5 of the NER
the RITs	collectively, the regulatory investment test for distribution and transmission
RIT–T	regulatory investment test for transmission
SACOSS	South Australian Council of Social Service
SAPN	SA Power Networks
TAPR	transmission annual planning report
transmission business	transmission network service provider
VCR	value of customer reliability

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1 Executive summary

The Australian Energy Regulator (AER) develops and monitors the application of a cost–benefit analysis framework for major network investments. Separate, although substantively similar frameworks apply to transmission investments (the RIT–T) and distribution investments (the RIT–D) (collectively, the RITs).

To assist transmission and distribution network service providers (collectively, network businesses) in applying the RITs effectively, we develop and, from time to time, amend or replace RIT application guidelines (the RIT guidelines). This final decision explains what changes we have made in developing version three of the RIT guidelines.

These amendments follow our large-scale review of the RIT guidelines. This review did not consider the appropriateness, effectiveness and efficiency of the RITs themselves, as the Council of Australian Governments Energy Council (COAG EC) considered this in early 2017. During our RIT guidelines review, we carefully considered and consulted on issues that were identified in, or arose from:

- The COAG EC's review of the RIT–T, which it finalised in February 2017.[1]
- The replacement expenditure (repex) planning arrangements rule change (repex rule change), finalised in July 2017.[2]
- Our compliance monitoring of RITs undertaken by network businesses.
- Our consultation process as part of this review, where we received input from:
    - A public forum we held in Sydney on 14 March 2018.[3]
    - 26 written submissions on an issues paper we published on 20 February 2018.[4]
    - A discussion forum we held as a videoconference across AER/ACCC offices on 29 August 2018.[5]
    - 17 written submissions on our draft RIT guidelines and explanatory statement that we published on 27 July 2018. A summary of and response to these submissions is in appendix A of this final decision.
- Developments that have occurred or have been occurring alongside the review. In particular, these include the Australian Energy Market Operator's (AEMO's) inaugural integrated system plan (ISP), the Australian Energy Market Commission's (AEMC's)

1 COAG EC, *RIT–T review*, February 2017.

2 AEMC, *Rule determination: National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017*, July 2017.

3 A summary note of this input is available on our website. See AER, *Summary note: Review of the RIT application guidelines public forum*, 14 March 2018.

4 A summary of these submissions is included in our explanatory statement to the draft RIT guidelines AER, *Explanatory statement to the draft RIT application guidelines*, 27 July 2018, Attachment A.

5 A summary note of this input is available on our website. See AER, *Summary note: Review of the draft RIT application guidelines discussion forum*, 29 August 2018.

coordination of generation and transmission investment review and the Energy Security Board's (ESB's) work to report to COAG EC on how to convert the ISP into action.

On the latter point, it is worth noting that this RIT guidelines review has focussed on improving guidance for applying the current RITs[6], which are prescribed in the current regulatory framework.[7] We recognise that developments to convert the ISP into action are likely to lead to changes to the National Electricity Law (NEL) and/or National Electricity Rules (NER) that may affect the RIT provisions in the NER. If this occurs, we expect a subsequent update of the RIT–T (and potentially the RIT–D) will be required, along with updates to the relevant RIT guidelines. Despite these developments, this RIT guidelines review remains valuable because:

- Regardless of how the ISP is included in the NEL and/or NER, it provides valuable information for RIT proponents on inputs, modelling techniques and an understanding of a potential network development path. As such, it is valuable to provide guidance on how to use the ISP to inform the RITs in the interim.
- The RIT cost–benefit analysis remains essential as the ISP is not expected to replace the function of the RIT–D or the RIT–T for all transmission network investments in the National Electricity Market (NEM) as it is expected to focus on investments on the national transmission flow path that have material inter-regional implications. Moreover, if the ISP takes on some of the RIT–T functions, our guidance on performing a cost–benefit analysis will be useful to AEMO in performing this function.
- Several useful updates were warranted given there has been no broad-scale review of the RIT guidelines since their development in in June 2010 for the RIT–T and August 2013 for the RIT–D.
- This RIT guidelines review follows from the COAG EC's request to commence reviewing the RIT–T guidelines in 2017.[8] Completing the RIT guidelines review is also a predecessor for meeting a Finkel Review recommendation for the COAG EC to start a review of the RITs by mid-2020.[9]

Having considered the broad range of issues before us, we have made various changes to the RIT guidelines. Some notable changes include:

- Introducing a section that links the purpose of the RITs to promoting the National Electricity Objective (NEO) to help RIT proponents apply the RITs more effectively. We explain that the RITs predominately promote the NEO by promoting investment efficiency. The RITs promote investment efficiency by requiring major investment decisions to undergo a cost benefit analysis and be subject to competitive neutrality, transparency and accountability.

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6 That is version 1.0 of the RIT–T, published 29 June 2010 and version 1.0 of the RIT–D, published 23 August 2013.

7 See clauses 5.16 and 5.17 of the NER for the RIT–T and RIT–D provisions, respectively. At the time of writing, version 115 of the NER was in effect.

8 COAG EC, *RIT–T review*, February 2017, p. 8.

9 The Finkel Review recommended the introduction of 'Integrate Grid Plans', which AEMO developed under the name, 'Integrated System Plan'. See Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, June 2017, p. 26.

- Furthering the guidance provided on stakeholder consultation. The RIT guidelines now place a stronger emphasis on transparency and engaging with stakeholders consistently throughout and before the RIT application process. They also explicitly acknowledge the value of consumer engagement and refer to our 'consumer engagement guideline for network service providers'.[10]
- Introducing guidance on how AEMO's ISP should inform how network businesses apply their RITs. The RIT guidelines now explain how the ISP should inform input assumptions used in the RITs. RIT proponents should also refer to the ISP to better understand the inter-regional impacts of their investments, including how different investments in the NEM will affect each other.
- Introducing guidance on how to account for external capital contributions. The RIT guidelines clarify that a RIT is not required where the external financial contribution results in the project falling below the cost threshold. The RIT guidelines also now set out how external contributions should be treated in the RIT market-wide cost benefit analysis.
- Introducing new guidance that relates to replacement projects and programs following the repex rule change. This includes adding guidance on when the RITs apply to asset replacement programs, how to frame the base case as 'business-as-usual' (BAU) activities, and including new worked examples that apply to replacement projects (for example, when framing identified needs).
- Expanding the guidance on framing the identified need to emphasise that this should be framed as a proposal to consumers and as an objective rather than as a means to achieve an objective. This new guidance should assist RIT proponents to engage with consumers and undertake a RIT assessment that promotes competitive neutrality.
- Better aligning the RIT–T and RIT–D application guidelines to remove unnecessary differences where applicable and restructuring these documents so they are simpler to follow. This includes, among other things, extending the previous RIT–D guidance on how to treat the cost of land into the RIT–T application guidelines.
- Extending guidance on how we approve new classes of market benefits. This will give RIT proponents a clearer understanding of what we will consider. The RIT–D application guidelines also flag that we will consider market benefit classes relevant that previously only applied to the RIT–T.
- Introducing guidance on how RIT proponents can capture the effects of high impact, low probability (HILP) events within their RIT cost benefit analysis.
- Introducing guidance on how to select a reasonable value of customer reliability (VCR) and extending our previous guidance on how to select a reasonable discount rate.
- Expanding on and clarifying the guidance previously provided on option value, scenario analysis, sensitivity analysis and the treatment of external policies.
- Introducing guidance on the information that network businesses should provide when they cancel RIT assessments.

10 For these guidelines, see AER, *Better Regulation: Consumer Engagement Guideline for Network Service Providers*, 2013.

2 The AER's role in the RITs

A RIT is a cost benefit analysis that network businesses must perform and consult on before making major investments in their networks to address an identified need. When undertaking RITs, network businesses must give due consideration to what options are out there, before identifying the best way to address needs on their networks — which the NER call the 'preferred option'. The preferred option is the credible investment option which maximises the present value of the net economic benefit to all those who produce, consume and transport electricity in the relevant market.[11]

One of our roles is to be responsible for the economic regulation of electricity transmission and distribution services in the NEM. We are also responsible for ensuring compliance with and enforcing the NER. As part of these responsibilities, we develop the RITs and have a compliance and monitoring role over the operation and application of the RITs. This includes:[12]

- Developing, publishing and amending the RITs and the RIT guidelines.
- Determining whether other classes of market benefits or costs proposed by RIT proponents are relevant under the RITs.
- Determining if a person is an interested party for the purposes of disputing a RIT.
- Reviewing the cost thresholds for applying the RITs.
- Allowing network businesses extensions for publishing decisions under the RITs, as well as exemptions from reapplying the RITs following material changes in circumstances.
- Making determinations to settle RIT disputes. We can require a RIT proponent to amend its project assessment conclusions report or final project assessment report (final RIT report) if the RIT proponent makes errors set out under NER clauses 5.16.5(g) and 5.17.5(g), respectively.
- Monitoring the application of the RITs, throughout and after the RIT process.

These responsibilities assist in the more transparent and consistent application of the RITs.

2.1 The AER and RIT compliance

The current mechanisms we utilise to monitor and promote compliance with the RITs are:

- Ongoing review of RITs to assess whether the network businesses undertaking them are meeting their obligations under the NER. Our monitoring will increase in the future given that RITs apply to a broader scope of projects following the repex rule change, and many network businesses have recently started applying them for the first time.[13] CCP20

11 Where, the relevant market is the NEM in clause 5.17.1(b), but in clause 5.16.1(b), is the 'market' as defined in chapter 10 as any of the markets or exchanges described in the NER, for so long as the market or exchange is conducted by AEMO.

12 See NER clauses 5.15–17.

13 For example, before the repex rule change came into effect, ActewAGL, Ausgrid, AusNet Services, Energex, Essential Energy, and TasNetworks had never commenced a RIT–D. We are now starting to see some of these distribution

supported this direction in its submission to the draft RIT guidelines by suggesting we implement a framework for monitoring the application and operation of RITs to support continuous improvement. CCP20 submitted this should include monitoring how RITs (along with the transmission and distribution annual planning reports) are facilitating positive engagement with relevant stakeholders.

- Where appropriate, we publish the findings of our monitoring to promote RIT compliance.[14] The purpose is to educate and inform network businesses, consumers and other stakeholders of these important regulatory obligations, which promotes energy market transparency and good industry practice. For instance, publishing the nature of our compliance concerns with a specific RIT project disseminates the learnings to the industry as whole rather than confining them to the network business in question.
- Dispute resolution processes under NER clauses 5.16.5 or 5.17.5.[15] We can direct a RIT proponent to amend its final RIT report if it has misapplied the RIT or has made a manifest error in its calculations. The application of robust and transparent processes by RIT proponents minimises the likelihood of disputes. This is a reason why we encourage network businesses to engage with stakeholders and ourselves early on in the RIT application process.
- Specifying in our regulatory determinations that capital expenditure (capex) funding for particular projects ('contingent projects') is contingent on defined triggers occurring. For transmission network service providers (transmission businesses), our practice has been to include as a trigger, an AER determination that the investment satisfies a RIT–T.[16] When we use this mechanism, the transmission business must satisfy us that its investment satisfies the requirements of a preferred option under a RIT–T before it can recover the capex associated with that project from consumers.

Network businesses are also encouraged to undertake compliant RITs as the RITs play an important role in:

- Our decision on whether to provide capex associated with a project in a network business' efficient regulatory asset base (RAB) value at the start of a regulatory control period. A key consideration in determining the prudency and efficiency of capex is whether an eligible project satisfied a RIT.[17] For example, we considered TransGrid's

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businesses commence RIT–Ds (for example, Ausgrid).

14 We have published our compliance concerns with RITs and regulatory tests in the past. For example, see our assessment of TransGrid's regulatory test in AER, *Quarterly compliance report: October–December 2013*, February 2013, p. 24. Also see our assessment of Energex's regulatory tests in AER, *Quarterly compliance report: April–June 2011*, July 2011, p. 25.

15 Registered Participants, the AEMC, Connection Applicants, Intending Participants, AEMO and interested parties can raise RIT–T disputes. These parties, as well as non-network providers, may raise a RIT–D dispute.

16 Depending on what we specify in our regulatory determination, this this determination may, but need not be made as determination under NER clause 5.16.6.

17 For instance, under the NER, we have regard to whether a project satisfied a RIT when determining the prudency and efficiency of the associated capex when we determine the efficient RAB value at the start of a regulatory period. See NER cl. S6.2.1(d)(2) and S6.2.2(3) for distribution, and NER cl. S6A.2.1(d)(2); S6A.2.2(3) for transmission. We also have regard to this when assessing forecast capex for a regulatory control period (see NER cl. 6.5.7(b)(4) for distribution, and NER cl. 6A.6.7(b)(4)(ii) for transmission).

'Powering Sydney's Future' RIT–T when setting TransGrid's forecast repex for its 2018 to 2020 regulatory control period.[18]

- Our ex-post capex reviews where we can reduce the RAB value we would have otherwise provided a network business at the start of the regulatory control period if it overspent its previous capex allowance.[19] This determination must be consistent with the capex incentive objective and guidelines, have regard to the capex factors, and only consider information and analysis that the network business could have reasonably considered or undertaken when it incurred the relevant capex.[20] Network businesses' previous RITs are a useful source of information and analysis for making this determination.

The COAG EC has flagged the potential to introduce civil penalty provisions for the RIT rules.[21] The AEMC has recommended to the COAG EC that several provisions be subject to civil penalty provisions[22], given the importance of a robust planning framework to deliver efficient network services and an efficient competitive energy services market.[23] Specifically, the AEMC identified the following obligations for which civil penalty provisions should apply:

- RIT proponents must apply RITs to RIT projects, except in specific limited circumstances.[24]
- RIT–D proponents must consider all options that could reasonably be classified as credible options, without bias to energy source, technology, ownership, and whether it is a network or non-network option.[25]
- RIT–T proponents must consider all options that could reasonably be classified as credible options, taking into account a number of factors (including energy source, technology, ownership, and whether it is a network or non-network option).[26]
- RIT proponents must consult with all Registered Participants, AEMO and interested parties when following the RIT procedures in the NER.[27]

18 See AER, *Final decision: TransGrid transmission determination 2018 to 2020, Attachment 6 – Capital expenditure*, May 2018, p. 5–7.
19 We have this power under NER cl. S6.2.2A(f) for distribution, and NER cl. S6A.2.2A(f) for transmission.
20 See NER cl. S6.2.2A(g)–(h) for distribution, and NER cl. S6A.2.2A(g)–(h) for transmission.
21 COAG EC, *RIT–T review*, February 2017, p. 5.
22 AEMC, *Rule determination: National electricity amendment (contestability of energy services) rule 2017*, 12 December 2017, p. 130.
23 AEMC, *Rule determination: National electricity amendment (contestability of energy services) rule 2017*, 12 December 2017, p. 68.
24 NER cl. 5.16.3(a) for transmission and cl. 5.17.3(a) for distribution.
25 NER cl. 5.15.2(c).
26 NER cl. 5.15.2(b).
27 NER cl. 5.16.4(a) for transmission and cl. 5.17.4(a) for distribution.

3 Background

This section includes background information to assist stakeholders in understanding the current role of the RIT guidelines in the operation of the RITs. It provides context around this review. It also explains projects and ongoing work that relate to this review.

3.1 Content in the RIT guidelines

We published the first RIT guidelines in June 2010 for the RIT–T and August 2013 for the RIT–D. We made minor amendments to both RIT guidelines in September 2017 to incorporate changes necessary to accommodate the repex rule change.

Each of the RIT guidelines provide guidance on:[28]

- The purpose of the RITs and projects subject to a RIT assessment.
- How an identified need should be expressed and what constitutes an identified need for the purposes of RIT assessments.
- Identifying reasonable scenarios for differing 'states of the world' to use in conducting a scenario analysis as part of the cost–benefit analysis.
- Identifying credible options, including the number and range of credible options. This explains how these options must address the identified need and be commercially and technically feasible.
- How to select a preferred option — that is, the credible option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the relevant market.
- Valuing costs, including the costs of complying with laws and regulations.
- How to value market benefits by deriving relevant states of the world, comparing these states of the world and weighting benefits in each reasonable scenario. The RIT guidelines also explain the different classes or categories of market benefits.
- The treatment of uncertainty and risk, including around market benefits and costs. This includes guidance on how an appropriate formulation of credible options and an appropriate selection of reasonable scenarios can enable the assessment to capture option values.
- Externalities, which should not be included in the RIT assessments in either the costs or benefits of credible options. Externalities include impacts on parties other than in their capacity as producers, consumers or transporters of electricity in the relevant market.
- How to choose a suitable modelling period for a RIT.
- The process to follow in applying the RITs by describing the stakeholder consultation steps prescribed in the NER, as well as the process for reapplying a RIT following a material change in circumstances.

[28] AER, *RIT–T application guidelines*, September 2017; AER, *RIT–D application guidelines*, September 2017.

- The dispute resolution process. This includes guidance on the requirements and procedures for making RIT disputes, along with how we will make determinations on RIT disputes.
- Calculating different classes of market benefits, using worked examples. This includes benefits associated with voluntary load curtailment, involuntary load shedding, costs to other parties, timing of expenditure, option value and energy/network losses.

The RIT–T and RIT–D application guidelines differ in some areas, but we have tried to align the two RIT guidelines more in this review. Following this review, the two RIT guidelines mainly differ in that the application guidelines for the:

- RIT–D provide specific guidance on screening for non-network options before publishing a determination and an exemption from publishing a non-network options report.[29] This guidance is only included in the RIT–D application guidelines as it is specific to the RIT–D requirements in the NER.
- RIT–D provide specific guidance on calculating market benefits (including worked examples) relating to load transfer capacity (when end users gain access to a back-up of power supply) and embedded generators.
- RIT–T provide additional guidance and worked examples on calculating market benefits that are more likely to relate to effects on the wholesale market, including changes in the variable operating costs of supplying electricity to load, ancillary services costs and competition benefits.
- RIT–T provide an additional worked example on an interconnector project with benefits that accrue across NEM regions.
- RIT–T and RIT–D have different NER references and use different worked examples to reflect differences in the relevant NER clauses, as well as the differences between distribution and transmission network investments.

3.2 Context of this review

When we made minor amendments to both RIT guidelines in September 2017, we flagged that we would commence a larger-scale review of the RIT guidelines to capture:

- Issues identified within the COAG EC's RIT–T review. While the COAG found the RIT–T remains the appropriate mechanism to ensure that new transmission infrastructure in the NEM is built in the long term interests of consumers, it also suggested we review our RIT–T application guidelines.[30]

29 Clause 5.17.4(c) of the NER states that a RIT–D proponent is not required to prepare a non-network options report if it determines, on reasonable grounds, that there will not be a non-network option that is a potential credible option or that forms a significant part of a potential credible option to address the identified need.

30 COAG EC, *RIT–T review*, 6 February 2017, p. 8. The recent Finkel Review echoed this recommendation in Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, June 2017, pp. 132–133.

- Any issues arising from the repex rule change that are yet to be addressed, as this extends the RITs to cover network replacement or refurbishment decisions, as well network expenditure arising from asset de-rating decisions.[31]
- Other provisions in the RIT guidelines that require amendment, including the areas where our compliance activities have identified a lack of clarity around how RIT proponents can best apply the RITs.

When amending the RIT guidelines in response to these factors, we have also considered how other regulatory mechanisms complement the RITs in providing transparency and non-network engagement in network planning. Many of these complementary mechanisms have recently improved, or have been improving. For instance:

- Network businesses must conduct annual planning reviews to identify the efficient level of investment required to deliver network services. Network businesses then publish 'annual planning reports' (APRs) — DAPRs for distribution and TAPRs for transmission. These reports provide public information on emerging network constraints, including potential options to alleviate these constraints. In making this information publicly available, APRs increase the opportunities for non-network businesses to propose options to meet those needs. Following the repex rule change in July 2017, APRs must now include network asset retirement and de-rating information.[32]
- The distribution network planning and expansion framework requires distribution network service providers (distribution businesses) to engage with non-network businesses by having a demand side engagement strategy and maintaining a demand side engagement register.[33] Also, our new demand management incentive scheme provides incentives for distribution businesses to undertake a transparent market testing process and to manage demand as part of its preferred option when doing so is efficient.[34]
- In June 2017, we published a DAPR template (or more formally, the system limitations template).[35] The DAPR template aims to improve the consistency and useability of DAPRs across the NEM, thereby making it easier for non-network businesses to identify and propose solutions to address identified network needs. In late December 2018, we will publish TAPR guidelines to promote transmission businesses in providing consistent information in a consistent format.[36]

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31 AEMC, Rule *determination: National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017*, July 2017, p. ii.

32 AEMC, *Rule determination: National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017*, July 2017.

33 AEMC, *Rule determination: National Electricity Amendment (Distribution Network Planning and Expansion Framework) Rule 2012*, October 2012, pp. i–iii.

34 AER, *Explanatory statement: Demand management incentive scheme — Electricity distribution network service providers*, December 2017.

35 AER, *Final decision: Distribution annual planning report template V1.0*, June 2017.

36 The TAPR guidelines follow from NER clause 5.14B.1. This follows from AEMC, *Rule determination: National Electricity Amendment (Transmission Connection and Planning Arrangements) Rule 2017*, May 2017. The TAPR guidelines will be available on our website under: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/transmission-annual-planning-report-guidelines.

- In September 2018, we published an industry practice application note to support network businesses in adopting best practice approaches to asset replacement planning and in complying with the repex rule change.[37] We plan to finalise this application note in January 2019 as a companion piece to the RIT guidelines.[38]

More detailed background information on the context of this review, including the work leading to this review and related projects, is provided in section two of our issues paper.[39]

37 AER, *Draft industry practice application note: Asset replacement planning*, September 2018.

38 We will make the final industry practice application note publicly available on our website under https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/industry-practice-application-note-for-asset-replacement-planning.

39 AER, *Issues paper: Review of the application guidelines for the regulatory investment tests*, 20 February 2018.

4 The RITs in promoting the National Electricity Objective

Under the NER, the purpose of the RITs is to 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 relevant market (the preferred option).[40]

The RIT guidelines frame this purpose in the context of the NEO to help RIT proponents apply the RITs more effectively. This is where the NEO is to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity.[41]

Realising the purpose of the RITs means that, before investing in a large project to meet a need on the network, RIT proponents will consider all credible options to meet that need, before selecting the option that maximises the net economic benefit in the relevant market. Through this, the RITs promote investment efficiency, which promotes the NEO by reducing the risk that consumers will pay for inefficient investments.

The RIT guidelines explain that by requiring RIT proponents to consider all credible options in identifying the most efficient investment, the RITs promote competitive neutrality. This benefits consumers directly by reducing the risk that they will pay for inefficient investments. This also encourages efficient outcomes in the longer-term by supporting efficient contestable market development and performance by promoting a predictable network development framework around which competitive investments in the energy market can be made without bearing unnecessary risks from their customers or competitors investing inefficiently. A well-functioning contestable market can provide better long-term outcomes for consumers, such as by putting downward pressure on input prices and encouraging innovation.

The RIT guidelines also acknowledge that the RITs further promote investment efficiency by imposing transparency and accountability on major network investment decisions. This contributes to the NEO to the extent that other efficiency incentives under the regulatory regime are imperfect, or relatedly, to the extent that the economic interests of RIT proponents differ from the NEM overall.

Stakeholder views

Our issues paper published in February 2018 discussed our intention to provide new guidance on how the RITs contribute to achieving the NEO.[42] Stakeholder submissions on the issues paper generally supported this intention, and provided suggestions on how we should present this guidance. Our explanatory statement for the draft RIT guidelines

40 See NER clauses 5.16.1(b); 5.17.1(b).
41 NEL, Section 7.
42 AER, *Issues Paper: Review of the application guidelines for the regulatory investment tests*, February 2018, pp. 18–20.

provided a detailed discussion on these submissions, and explained how the draft RIT guidelines took them into account.[43]

After we published the draft RIT guidelines, we received some further submissions on this topic. The final RIT guidelines take these submissions into account by:

- Clarifying that the RITs promote competitive neutrality, not only in the context of network businesses considering credible non-network options, but also in the context of promoting a predictable network development framework around which competitive investments in the NEM can be made. This recognises the Australian Energy Council's (AEC's) submission that while the draft RIT guidelines referenced the importance of competitive neutrality, they did not clearly describe how competitive neutrality under the RITs aims to provide a predictable network development framework around which competitive investments in the energy market may be made with confidence.[44]
- Maintaining the draft guidance that promoting competitive neutrality promotes efficient outcomes, in line with the NEO. Competitive neutrality promotes the NEO because it promotes selecting the most efficient investment, as well as promoting efficient contestable market development and performance. Maintaining this nuance recognises the Public Interest Advocacy Centre's (PIAC's) support for the draft guidance, which explained that while the RIT promotes competitive neutrality, this is as a means of achieving the NEO rather than a goal in itself.[45]

It is worth noting that while the RITs are a market-based test, promoting efficient market outcomes should deliver the highest net economic benefits to electricity customers in the long-run. As such, it is not clear how we would alter the RIT cost benefit framework to be a more customer-focussed test, as AEMO has implied. It is worth noting that there was previously a 'customer benefits test' that estimated expected changes in prices. However, this test was considered to be less effective at promoting the NEO as it was more susceptible to measurement problems and less able to promote long-run efficient market outcomes and competitive neutrality.[46]

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43 AER, *Explanatory statement: Draft revisions of the application guidelines for the regulatory investment tests*, July 2018, pp. 17–19; 43–45.

44 AEC, *Submission to the draft RIT–T application guidelines*, 7 September 2018, p. 1.

45 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 6.

46 These problems have been discussed in ACCC/AER, *Submission to Energy Reform Implementation Group issues paper*, August 2006, p. 8; ACCC, *Regulatory test for new interconnectors and network augmentations*, 15 December 1999, p. 4; EY, *Review of the assessment criterion for new interconnectors and network augmentation: Final report to ACCC*, March 1999, Section 4; PC, *Electricity network regulatory frameworks: PC inquiry report Vol 2*, No. 62, 9 April 2013, p. 631.

5 New guidance relating to the RIT process

The RIT guidelines set out the process for and operation of the RITs, as prescribed in the NER. The draft RIT guidelines proposed guidance on this process, including:[47]

- Explaining that a RIT is not required where an external financial contribution results in the project falling below the cost threshold.[48] We discuss this further in section 7 of this final decision.
- Encouraging RIT proponents to engage with stakeholders consistently throughout and before the RIT application process. See section 5.1 for how we considered submissions on this area of our draft RIT guidelines.
- Explaining how the RIT–T and RIT–D processes can be better aligned. See the explanatory statement to the draft RIT guidelines for a discussion on this guidance.[49] Since submissions on the draft RIT guidelines did not focus on these changes, this final decision does not discuss this guidance further.
- Providing clearer guidance on the information that network businesses should provide when they cancel RIT assessments. See the explanatory statement to the draft RIT guidelines for a discussion on this guidance.[50] While most submissions did not discuss this proposed guidance, Origin Energy (Origin) supported the draft guidance for RIT proponents to clearly set out reasons for cancelling a RIT. Origin considered this information could inform participants of why a RIT did not proceed, and help others who are undertaking a RIT to learn from any identified issues.[51]

5.1 Consumer and non-network engagement in the RITs

Consultation with stakeholders is an integral part of the RITs and takes place throughout the RIT application process. Generally, rigorous consultation and consideration of both network and non-network options:

- Helps identify the preferred option, by allowing a broad spectrum of credible options to be considered and by providing additional scrutiny to the analysis to ensure it is robust.
- Adds credibility to a RIT application, reducing the scope for misunderstandings and disputes, and increasing our ability to fast-track further regulatory assessments on expenditure related to that project.

47 For further details on our approach taken in the draft RIT guidelines, including how we considered submissions on our issues paper, see AER, *Explanatory statement: Draft revisions to the RIT application guidelines*, July 2018, section 5 (pp. 20–24).

48 AER, *Explanatory statement: Draft revisions to the RIT application guidelines*, July 2018, pp. 20–22. Also see AER, *Issues Paper: Review of the application guidelines for the regulatory investment tests*, February 2018, pp. 22–24.

49 For a discussion on this topic, including how we considered submissions on the issues paper, see section 5.3 of AER, *Explanatory statement: Draft revisions to the RIT application guidelines*, July 2018, pp. 23–24.

50 For a discussion on this topic, including how we considered submissions on the issues paper, see section 5.4 of AER, *Explanatory statement: Draft revisions to the RIT application guidelines*, July 2018, p. 24.

51 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 2.

The RIT guidelines maintain several aspects of the draft RIT guidelines that were supported in stakeholder submissions. For instance, the RIT guidelines continue to:

- Explain the value of both non-network and consumer engagement[52], recognising that the previous RIT guidelines provided limited commentary on consumer engagement. This recognises support from the South Australian Council of Social Service (SACOSS) and Energy Consumers Australia (ECA) on providing more guidance on consumer engagement.[53]
- Reference our 'consumer engagement guideline for network service providers'[54], when providing guidance on consumer engagement. This is consistent with Energy Networks Australia's (ENA's) submission, which supported how the draft RIT guidelines built on our consumer engagement guidelines by suggesting some 'best practice' actions specific to the RITs.[55]
- Emphasise the importance of understanding broader consumer views, recognising that consumers that actively participate in consultation often benefit from the proposed projects disproportionately to the costs they will bear (due to postage stamp pricing). This is consistent with TransGrid's submission, which supported guidance that encouraged RIT proponents to understand broader consumer views.[56]
- Encourage RIT proponents to give adequate weight to the suggestions made by consumers, recognising that their submissions can take considerable time and effort. This is consistent with ECA's view that there should be an expectation that RIT proponents give adequate weight to the suggestions and perspectives of consumers.[57]
- Recommend RIT proponents make information publicly available, including modelling, inputs, assumptions and submissions (redacting confidential content) and undertake consistent and early engagement with stakeholders throughout and before the RIT process (such as through the APRs). This is consistent with TransGrid's support for providing transparent and user-friendly data where feasible and placing a greater emphasis on early engagement.[58]
- Emphasise the importance of considering credible options without bias, as supported in AGL's submission.[59]

Having considered stakeholder submissions, the RIT guidelines also expand on the draft guidance by:

- Clarifying that RIT proponents' efforts to understand broader consumer views might include convening a consumer reference group for large RIT projects. This addition recognises ECA's preference for the AER to require RIT proponents to convene a

52 See section 4.1 of the draft RIT application guidelines.
53 SACOSS, *Submission re: Review of the application guidelines for the RITs — Draft guidelines*, 7 September 2018, p. 1; ECA, *Submission on strengthening the consumer test — The RIT guidelines review*, 27 September 2018, p. 3.
54 For these guidelines, see AER, *Better Regulation: Consumer Engagement Guideline for Network Service Providers*, 2013.
55 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 3.
56 TransGrid, *Submission to draft RIT–T application guidelines*, 7 September 2018, p. 11.
57 ECA, *Submission on strengthening the consumer test — The RIT guidelines review*, 27 September 2018, p. 4.
58 TransGrid, *Submission to draft RIT–T application guidelines*, 7 September 2018, p. 11.
59 AGL, Submission re: Draft revisions of the application guidelines for the RITs, 13 September 2018, p. 1.

consumer reference group whose role would include providing a report to the AER on how well the RIT proponent has accounted for consumer suggestions.[60] Our additional clarification does not fully adopt ECA's suggestion to make this a requirement, as we would be unable to enforce such a requirement under the NER.

- When explaining how it is best practice to publish relevant documents that show detailed modelling, inputs and assumptions used for the RIT assessment, adding that RIT proponents should use their best endeavours to address potential confidentiality concerns that might prevent them from making data or modelling information available. We note that such endeavours might include aggregating, anonymising or redacting that information, or sharing it with requesting parties on a confidential basis. This recognises PIAC's submission that confidentiality concerns should not be a barrier to providing sensitive data as this can be anonymised and/or shared on a confidential basis.[61]
- Suggesting RIT proponents frame identified needs as a proposal to consumers, as suggested by the Consumer Challenge Panel (CCP20) and PIAC. See section 10.3 of this final decision for further discussion on this addition.
- Encouraging RIT proponents to be aware of the demands placed on stakeholders when there are multiple consultation processes on foot. For instance, the RIT guidelines state that engaging or being flexible to consider suggestions made outside written submissions might prove beneficial. This addition combines suggestions made by ECA and CCP20. For instance, ECA suggested RIT proponents consider suggestions made outside of written submissions and CCP20 raised the importance of managing stakeholder engagement when there are multiple RIT processes.[62]
- When encouraging RIT proponents to undertake early engagement, specifying that proactive early engagement might minimise the effort required later by better equipping prospective non-network proponents to propose more suitable or effective credible options. This addition recognises suggestions from ENA, CitiPower, Powercor and United Energy, who suggested guiding non-network proponents to engage early with network businesses.[63] While this suggestion was aimed at guidance for non-network businesses, we have targeted this at RIT proponents, who are responsible for applying the RITs and the RIT guidelines.
- Clarifying that if a RIT proponent takes a best practice approach to consumer and non-network engagement, this should reduce the scope for disputes and increase our ability to fast-track further regulatory assessments relating to that project. This goes some way to incorporate ECA's suggestion for us to be clear on how outcomes of engagement will be used in regulatory decision making whilst also recognising that we will need to consider revenue proposals and RIT applications on a case-by-case basis.[64]

60 ECA, *Submission on strengthening the consumer test — The RIT guidelines review*, 27 September 2018, p. 4.
61 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 6.
62 ECA, *Submission on strengthening the consumer test — The RIT guidelines review*, 27 September 2018, p. 4; CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, p. 9.
63 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 27; Citipower, Powercor and United Energy, *Submission re Draft application guidelines for the RIT–T and RIT–D*, 7 September 2018, p. 2.
64 ECA, *Submission on strengthening the consumer test — The RIT guidelines review*, 27 September 2018, p. 3.

6 Integrated system plan

The RIT guidelines explain how the ISP should inform how network businesses apply their RITs. This guidance is broadly consistent with the draft RIT guidelines, which is consistent with the broad support provided in submissions.[65] This guidance:

- Recognises that there is uncertainty around the ISP's status in the regulatory environment;
- Explains how the ISP should be used more broadly to inform inputs and assumptions; and
- Explains how the projects in the network development path identified in the ISP should inform the scenario analysis.

6.1 Recognising the evolving status of the ISP

In July 2018, AEMO published its inaugural ISP as an extension of its National Transmission Network Development Plan (NTNDP) functions in the NER and the NEL.[66] The ISP stems from a recommendation in the Finkel Review for more strategic planning of transmission infrastructure, including a new planning mechanism to facilitate the efficient development and connection of new renewable energy zones (REZs).[67]

It is expected that the NER and NEL will be amended to include the ISP as a function. Given the current ISP extends on the current NTNDP, we are expecting future legislative changes would integrate the NTNDP into the ISP. However, the precise function is currently uncertain and different models for how the ISP might be made actionable are being considered via the AEMC's coordination of generation and transmission investment review.[68]

Under all the options currently being considered for how to make the ISP actionable, our view is that the ISP will:

- Provide valuable inputs, modelling techniques and analysis;
- Provide a strategic plan for the development of the transmission network that will have a significant role on network planning in the NEM; and
- Will not replace the function of the RIT–T for all transmission network investments in the NEM.

Given this, and consistent with stakeholder views, it is valuable to provide guidance on how RIT proponents should use the information in the ISP to inform the RITs. Since relevant

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65 Submissions from AGL, CCP20 and Origin considered the draft guidelines struck a good balance on how the ISP should be used to inform RITs.

66 NEL 49(2)(a); NER cl. 5.20.2. Since the ISP extends on the functions of the NTNDP, we have permitted AEMO to integrate its 2017 NTNDP into its 2018 ISP. See AEMO, *Integrated System Plan Consultation*, December 2017, p. 3.

67 The Finkel Review recommended the introduction of 'Integrate Grid Plans', which AEMO developed under the name, 'Integrated System Plan'. See Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, June 2017, p. 26.

68 AEMC, *Options paper: Coordination of generation and transmission investment*, 21 September 2018.

regulatory reforms are yet to occur, where possible, we have provided broader guidance that balances the need to be helpful with the need to be relevant under different plausible circumstances. For instance, where possible, we have provided guidance that can apply to material published by AEMO in developing the NTNDP, ISP or similar documents.[69]

Moreover, we also recognise that the RIT guidelines may need to be updated later once the ISP framework has been adopted in the NER and/or NEL. This position has been acknowledged in submissions from Origin and AEMO.[70]

6.2 Using the ISP to inform the RIT application

Through this RIT guidelines review, we have introduced guidance on using the ISP to inform the application of the RITs. Previously, there was only limited guidance on using AEMO's NTNDP for developing assumptions to use in a RIT–T analysis. In contrast, the RIT guidelines now provide:

- Guidance on how to use material in the ISP for developing assumptions (see section 3.4.1 of the RIT guidelines). We maintain the draft guidance that RIT proponents should use AEMO's technical/input assumptions as the starting point for input assumptions. However, the final RIT guidelines also strengthen the connection between the RITs and ISP, which was supported in several submissions.[71] We do this by:
    - Explicitly stating that where it has been adopted under the NER and/or NEL, RIT proponents should use the ISP as a default for assumptions in the RITs.
    - Clarifying that while it may be appropriate to use alternative sources of information where this is more up-to-date or appropriate to the circumstances, there should also be 'evidence and good reason' to demonstrate that this is the case. This has regard to Origin's submission in support of the most up-to-date information being used where data has been superseded or changed.[72]
- An example in the RIT–T of how a RIT–T proponent might apply its analysis to an ISP-identified transmission network extension to realise the benefits of a REZ (see section 3.4 of the RIT–T application guidelines). While the draft RIT–T guidance advised that a RIT proponent 'may' use the ISP as a basis for articulating an identified need and 'may' use investments identified in the ISP to form the basis for a credible option to meet an identified need, the final RIT–T application guidelines changed this direction to 'should'. However, consistent with Origin's suggestion, we have also clarified that RIT proponents should not solely rely on the ISP for identifying credible options to satisfy the identified need.[73]

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69 For example, see section 3.4 of the final RIT guidelines.

70 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 1; AEMO, *Submission on the RIT application guidelines draft determination*, 10 September 2018, pp. 3–4.

71 Submissions from AEMO, CEC, ENA, Snowy Hydro and TransGrid supported having a stronger link between the ISP and the RITs. In particular, AEMO expressed concern about the extent of caveats in the draft guidance around how to use the ISP's input assumptions.

72 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 2.

73 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 2.

- An example in the RIT–D application guidelines of how a RIT–D proponent might account for the preferred ISP network development path when applying a RIT–D (see section 3.4 of the RIT–D application guidelines).
- A statement that RIT proponents should have regard to the ISP when considering benefits that accrue to other regions in the NEM (see section 3.7.3 of the RIT guidelines).
- A statement that RIT proponents should have regard to information in the ISP when developing reasonable scenarios (see section 3.8.1 of the RIT guidelines).
- An example of how to apply the RIT–T to support a 'whole of network' perspective in planning (section 3.8.4 of the RIT–T application guidelines).
- A definition of a REZ in appendix B of the RIT guidelines.

This new guidance accounts for stakeholder submissions in that it:

- Continues to recognise that ISP results and assumptions should be critical inputs to RITs, as recognised by CCP20.[74] This is consistent with our principles-based view that there is merit in RIT proponents forming assumptions with regard to an independent expert source. This is likely to provide more transparency and reduced scope for biased results relative to an approach where different RITs rely on different sources for assumptions depending on the RIT proponent.
- Is less caveated than in the draft guidance, which was flagged as a concern by AEMO.[75] We have still maintained some caveats, such as allowing ISP assumptions to be tested. Allowing some level of scrutiny is valuable for RIT proponents to consider stakeholder input, use new information, consider material changes in circumstances, and test reasonable scenarios that the ISP did not explore that are integral to that specific RIT.
- Does not, in our view, require RIT proponents to rely too heavily on the ISP to the point that RIT proponents do not conduct a robust cost benefit analysis. We have considered SACOSS's core concern that there are risks of over-relying on the ISP to ease the RIT–T's analytical burden.[76] This is also consistent with PIAC's view that while the ISP is a useful starting point for RIT modelling, RIT proponents should still select inputs, use the most up-to-date information available and conduct modelling that is appropriate and proportionate to the identified need.[77] This also recognises Delta Electricity's view that the RITs should not rely on benefits from ISP projects without further rigorous independent assessment.[78]

6.3 How to use the ISP's network development path

Our explanatory statement to the draft RIT guidelines explained that while RIT proponents may use investments identified in the ISP to form the basis for a credible option to meet an

74 CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, p. 5.
75 AEMO, *Submission on the RIT application guidelines draft determination*, 10 September 2018, p. 3.
76 SACOSS, *Submission re: Review of the application guidelines for the RITs — Draft guidelines*, 7 September 2018, p. 1.
77 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 11.
78 Delta, *Submission to draft RIT–T application guidelines*, September 2018, p. 2.

identified need, they should not, as a practice, treat the network development pathway as a series of projects that will occur across all reasonable scenarios.[79]

The final RIT guidelines explicitly recognise that a NEM-wide perspective requires RIT proponents to consider how different investments affect each other. They also advise that RIT proponents should consider the risks around whether uncertain investments become committed, recognising that uncommitted projects in the network development pathway may not occur. Specifically, the final RIT guidelines advise that where doing so is expected to have a material effect on the analysis (which may not be the case for minor intra-regional projects), RIT proponents should include at least one reasonable scenario where relevant projects under AEMO's network development path:

- Become committed consistent with the ISP's recommended timing.
- Do not become committed (unless they are already 'committed' or 'anticipated projects').[80]

For completeness, we also clarify if an ISP-identified project is undergoing the RIT–T, the project must be included in all non-'base case' states of the world and excluded from all 'base case' states of the word so its market benefits can be estimated.

While several stakeholders supported RIT proponents assuming projects in AEMO's network development path would occur across all reasonable scenarios[81], we have taken the above position instead. The benefits of our approach are that it:

- Elaborates on, clarifies and strengthens the draft RIT guidelines, which many stakeholder submissions supported. For example, the AEC and Delta Electricity did not support treating AEMO's ISP-identified projects as committed projects that occur across all reasonable scenarios.[82] Similarly, stakeholders like PIAC submitted it would be reasonable to consider the ISP network development path as part of reasonable future scenarios.[83]
- Reinforces that there should be at least one reasonable scenario where ISP-identified projects will not occur (unless they are 'committed' or 'anticipated projects'). Including such a scenario is important for RIT proponents to transparently consider the risks of different credible options, including whether the net economic benefits of a project rely on another uncertain project becoming committed. There might be a reasonable basis to

79 AER, *Explanatory statement: Draft revisions of the application guidelines for the RITs*, July 2018, p. 38.

80 Under the current RIT–T application guidelines, 'anticipated projects should be included in all relevant states of the world, based on the reasonable judgement of the TNSP'. Under the RIT–T, anticipated projects are in the process of meeting at least 3 out of the 5 criteria for being a committed project under clause 18 of the RIT–T.
Broadly, these criteria include (1) the proponent has obtained all required planning consents, construction approvals and licenses. (2) Construction has either commenced or a firm commencement date has been set. (3) The proponent has purchased/settled/acquired land (or commenced legal proceedings to acquire land) for the purposes of construction. (4) Contracts for supply and construction of the major components of the necessary plant and equipment have been finalised and executed, including any provisions for cancellation payments. (5) The necessary financing arrangements, including any debt plans, have been finalised and contracts executed.

81 See submissions from CEC and TransGrid. The ENA's submission supported applying 'group 1' and 'group 2' projects across all reasonable scenarios, but considered there was too much uncertainty to do this for 'group 3' projects.

82 Delta, *Submission to draft RIT–T application guidelines*, September 2018, p. 2; AEC, *Submission to the draft RIT–T application guidelines*, 7 September 2018, pp. 2–3.

83 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 4.

assign a low probability to that scenario occurring, but including this scenario will be important for the RIT proponent to understand, consult on and assess these risks associated with that credible option.

- Recognises that there is a reasonable likelihood that the projects AEMO has identified as optimal will occur, even if they are yet to be committed or anticipated. As such, including at least one reasonable scenario where relevant projects in AEMO's network development pathway occur is also valuable for providing transparency. This is also important for exploring risks given the economic benefits of a credible option might depend on an uncertain, yet possible, ISP-identified project not occurring.

7 Accounting for external funds in the RITs

The RIT guidelines maintain the guidance introduced in the draft RIT guidelines on how RIT proponents should account for external funds that they receive in connection with RIT projects. We advise that:

- An external contribution would exempt a RIT project from needing to undergo a RIT if it reduces the capital cost of the project to be below the relevant RIT cost threshold. In these circumstances, the external contribution means that, to the extent of that contribution, the costs of the project do not need to be recovered from electricity consumers via the regulated charges of the relevant network business or businesses.
- Once it has been determined that a RIT applies, since the RIT is a market-wide cost–benefit analysis[84], the external funds will have a different impact on the net economic benefits of the project if they come from a:
    - A registered participant under the NER or any other party in their capacity as a consumer, producer or transporter of electricity in the relevant market (a Participant).[85] Funds that move between Participants count as a wealth transfer and should not affect the calculation of the final net-benefit under the RIT. This implies that if a participant (for example, a generator) provided funding for a RIT project, we would treat this contribution as a wealth transfer between Participants and it would not affect the final net benefit calculated under the cost benefit analysis.
    - Any other party (Other Party). Funds that move from an Other Party to a Participant should count as an increase the final net economic benefit calculated under a RIT. This implies that if a government or government body provided funding for a RIT project, this would increase the final net economic benefit calculated under the cost benefit analysis.

CCP20 and PIAC strongly support this approach because:[86]

- The relevant cost threshold for whether a RIT applies is the amount funded through regulated revenues. The cost threshold test recognises that the purpose of the RIT cost thresholds is an initiation threshold question regarding the amount consumers have at risk via the RAB and hence whether the project warrants the additional scrutiny and rigour of undertaking a RIT.
- Once it has been determined that a RIT applies, the focus turns to the evaluation of the wider market costs and benefits of the selected credible options to meet the identified

84 The purpose of the RITs 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 relevant market ('the preferred option'). This is where 'relevant market' is the NEM for the purposes of the RIT–D. For the RIT–T, this is any of the markets or exchanges described in the NER, for so long as the market or exchange is conducted by AEMO. See NER chapter 10 and clauses 5.16.1(b) and 5.17.1(b).

85 This definition captures entities such as distributed energy resource suppliers and energy service companies.

86 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, pp. 6, 8; CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, pp. 10–13.

need.[87] These market-wide costs and benefits will accrue, ultimately to electricity consumers. On contributions provided by:

  - Market participants; these contributions will come at a cost to that participant. PIAC submits that this cost will ultimately be recovered via consumers' electricity bills.
  - Other parties outside the NEM; these funds will effectively improve the net economic benefit of the option on a NEM-wide basis. This is because a smaller portion of the total project cost will be recovered via consumers' electricity bills. This is therefore consistent with the NEO, which focuses on delivering outcomes in the long-term interests of electricity consumers in the NEM rather than some broader societal benefit.

- It is appropriate that the cost threshold test and net benefit tests have a different focus, given their different purposes (explained above). This different focus is not only reflected in the treatment of external contributions, but also in that only capex is considered in the cost threshold test, whereas operating expenditure is included in the net benefit assessment.

We agree with CCP20 and PIAC and hold the view that our position is consistent with the NER in how it defines the scope of the market and requires the RITs be based on a cost benefit analysis. In general, submissions to the draft RIT guidelines were divided between:

- CCP20 and PIAC, which supported of our position as per the discussion above.
- Network representatives and the Clean Energy Council (CEC) that considered both external funds from Participants and Other Parties should increase the net economic benefit of a credible option. AEMO also considered there might be merit in treating generator contributions as external funds as this reduces the costs borne by customers. We do not support this suggestion for the reasons discussed above. See Table 3 for a detailed response to these submissions.
- The AEC and Delta Electricity considered that no external funds should increase the net economic benefit of a credible option. We do not support this suggestion for the reasons discussed above. See Table 3 for a detailed response to these submissions.

While the RIT guidelines maintain the overall position in the draft RIT guidelines, they also provide some further clarity having considered submissions. For instance, the RIT guidelines:

- Expand on the draft guidance by stating that RIT proponents should report the expected net economic benefit of different credible options in absence of funds from non-market parties, as well as after receiving these funds. This addition follows a suggestion in Origin's submission, which we consider will increase the transparency of the RIT,

87 This differs from SAPN's view that the RIT's ultimate aim is to identify projects that will be funded through regulated charges. Our interpretation of the RIT's objective is consistent with PIAC and CCP20 rather than SAPN. That is, the RITs promote NEM-wide efficient investments (see section 4 for a further explanation of the role of the RITs in promoting the NEO).

allowing stakeholders to understand what is driving the results of the cost benefit analysis.[88]

- Extend the worked example on how to treat funding from a Participant to clarify we would expect that a rational market participant providing a capital contribution toward a project to benefit from that project occurring by at least as much as the capital contribution it had provided. If that additional benefit includes NEM benefits (such as those relating to ancillary services markets), then this can and should be captured in the RIT already. If any NEM benefits have not already been captured (due to immateriality or oversight) the provision of the capital contribution would be a reasonable basis for the RIT proponent to further explore whether it has excluded any relevant market benefits from its RIT analysis. This additional clarity responds to SA Power Networks' (SAPN's) view that contributions from electricity market participants are not wealth transfers when they have additive rather than neutral effects (for example, when a co-contribution addresses the identified need and an unregulated need where the unregulated project must be delivered on the network).[89]
- Clarify that RITs do not prevent RIT proponents from taking funding from market participants. RITs merely reveal what projects are preferred from a market-wide perspective. In fact, RITs might reveal preferred options that are efficient due to their non-network benefits (for example, if they have benefits in the NEM wholesale or ancillary services markets). If, in these cases, the preferred option has a net cost at the RIT proponent's level, this analysis could provide a basis for negotiating co-contributions. We have formed this view having considered suggestions from ENA and SAPN that preventing RIT proponents from taking funding from market participants into account would present a barrier to joint ventures.[90]

88 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 1.

89 See SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, pp. 3–4.

90 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 20; SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 4.

8 Treatment of high impact, low probability events

Section 3.8.3 of the RIT guidelines provides guidance on how RIT proponents can account for HILP events when applying a RIT. We have added this guidance to the previous RIT guidelines after, in its RIT–T review, the COAG EC recommended providing more guidance on how to better weight HILP events, such as the 'black system' event experienced in South Australia in 2016.[91]

Consistent with our draft guidance, the RIT guidelines advise that RIT proponents can capture HILP events by:

1. Including a reasonable scenario where the HILP event occurs. CCP20 supported this guidance by noting there is a role for including HILP events as part of scenario testing where doing so is logical and has reasonable supporting data on which to define the HILP event and assign reasonable probabilities to the event.[92]
2. Costing the impact of that HILP event occurring. In costing this event, we would expect the RIT proponent to include the market benefit category, changes in involuntary load shedding using a reasonable forecast of the value of electricity to customers. As a practice, the RIT proponent would use a VCR to reflect this value. Submissions from CCP20, Origin, PIAC and SACOSS supported our position on this point. While TransGrid suggested that current VCR estimates are unable to capture the economic impact of HILP events, this is a matter that should be considered as we develop a new methodology for estimating VCR.[93] Moreover, we advise RIT proponents to use a VCR that is appropriate to the range and duration of customers that the HILP event would affect and to have supporting evidence on why that VCR is appropriate. This recognises how submissions from CCP20 and PIAC acknowledged that RIT proponents should provide reasons that are transparent, evidence-backed, defensible, and consulted on with relevant consumers and other stakeholders if they are to apply a specific VCR to HILP events.
3. Weighting the economic impact of the event by a reasonable estimate of its probability of occurring.

On step 3 above, we have maintained our draft guidance on probability weighting scenarios with HILP events because:

- It is consistent with economic theory to weight reasonable scenarios by their probability of occurring in performing a cost benefit analysis.[94] While ENA and SAPN submit that regret theory provides an economic basis to weight HILP events by a value that is higher than their probability of occurring[95], probability weighting is consistent with how expected

92 CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, p. 6.

93 The project page for our VCR review can be found under: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/values-of-customer-reliability-vcr.

94 Environmental Assessment Institute, *Risk and uncertainty in CBA: Toolbox paper*, April 2006, p. 27.

95 ENA references literature on regret theory, which can provide a basis for people placing a greater weight on avoiding

net present value is estimated, which is consistent with the RITs themselves and how all other reasonable scenarios in the RITs are weighted. Moreover, CCP20 caution that ENA is proposing to apply regret theory asymmetrically to favour a particular outcome.[96]

- An approach that entails applying 'a risk aversion to extreme consequences' would be more opaque and subjective than probability-weighting, and therefore be more likely to distort the RIT outcome and undermine transparency. This view is supported by PIAC's submission that considered weighting HILP events higher than their probabilities would be opaque and could allow RIT proponents to reverse engineer particular outcomes, undermining the RIT's ability to transparently determine the most efficient outcome.[97]
- If electricity consumers have different reliability preferences for HILP events (which is implied by submissions from ENA, SAPN and TransGrid requesting we allow RIT proponents to propose different weights for HILP events consistent with community expectations), VCR should capture this. We are willing to support there being a higher VCR associated with HILP events if this is supported by evidence.
- Weighting HILP events to account for a perceived social 'premium' could create a distortion, as the AEC and Delta Electricity suggest.[98] HILP events are highly subjective to forecast and quantify.

Moreover, we consider we have explored the recommendation in COAG EC's RIT–T review to consider how to 'better weight' HILP events. There is no reason to narrowly interpret COAG EC's reference to 'weighting' as a direction to move away from weighting events by their probability of occurring, as some network representatives have suggested.[99] In our view, it would be just as consistent with COAG EC's suggestion to weight the economic impact of HILP events differently by allowing VCR to reflect 'community expectations' around reliability preferences to avoid HILP events.[100]

Having considered submissions to the draft RIT guidelines, we have made the following additions to the RIT guidelines:

- When encouraging RIT proponents to explore the robustness of credible options to different risks, we have added that RIT proponents should explore the viability and effectiveness of control schemes, non-network options and operational practices to manage or respond to those risks. This should encourage RIT proponents to explore whether non-network solutions should be in place to provide energy security services. This addition recognises AEC's and Delta's commentary on how the appropriate solution

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highly adverse outcomes in a way that minimises regret.

96 CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, pp. 14–15.

97 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 9.

98 Delta Electricity, *Submission to draft RIT–T application guidelines*, September 2018, p. 1; AEC, *Submission to the draft RIT–T application guidelines*, 7 September 2018, p. 2.

99 For example, see ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 11; SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 4; and TransGrid, *Submission to draft RIT–T application guidelines*, 7 September 2018, p. 11.

100 We are exploring whether to determine a VCR for prolonged an extensive outages envisaged by HILP events. See AER, *Values of customer reliability: Consultation paper*, October 2018, pp. 16–17.

in response to HILP events is often through control schemes and operational practices, rather than through building assets.[101]

- Stating that when exploring the economic impacts of HILP events, RIT proponents should, among other things, recognise the different factors influencing the impact of certain HILP events (for example AEMO's role in determining new 'protected events'). This incorporates Origin's suggestion that it is important to consider AEMO's new role in determining 'protected events' when estimating the impact of HILP events.[102]
- Requiring that RIT proponents to base the impact and probability of a HILP event on the assumption that there was efficient BAU industry practice before and in response to the event. This reflects PIAC's submission that the scenario analysis must be reasonable such that the HILP event is based on BAU and efficient industry responses to such events to avoid skewing the modelling.[103] This addition ties into the above guidance on considering AEMO's role in 'protected events' as this increases AEMO's ability to restore the electricity system back to a secure state. It also recognises CCP20's point that while the 2017 COAG EC RIT–T review referenced the SA 'black system' event as a HILP event, there were multiple factors contributing to this HILP event and there are relatively low-cost actions available to restore power and minimise the probability of a similar event occurring.[104]
- Expanding our guidance on HILP events to explain how risks associated with these events might be considered through sensitivity testing, as well as through scenario analysis. This recognises AEMO's suggestion to explore increasing the scope for qualitative assessments around these events.[105] While qualitative assessments can have value, we consider a similar value can be gained through sensitivity testing, although we consider sensitivity testing would allow for greater clarity and transparency.

101 Delta Electricity, *Submission to draft RIT–T application guidelines*, September 2018, p. 1; AEC, *Submission to the draft RIT–T application guidelines*, 7 September 2018, p. 2.
102 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 2.
103 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 9.
104 CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, pp. 7–8.
105 AEMO, *Submission on the RIT application guidelines draft determination*, 10 September 2018, p. 2.

9 Replacement projects and forming a base case

The RIT guidelines provide guidance on replacement projects and programs. This is also consistent with AEMC's final rule determination for the repex rule change, where it recommended we provide additional guidance around the repex projects and programs.[106]

9.1 Guidance on replacement projects

The RIT guidelines provide guidance on:

- Whether and when network businesses should apply RITs to asset replacement programs (see section 2.2 of the RIT guidelines). We expand on our draft guidance where submissions from Energy Queensland and PIAC requested we further clarify our view on when network businesses must apply RITs to multiple low value assets across multiple geographically dispersed locations.[107] In response to this, we have provided a high-level example, which draws a distinction between (a) a program to proactively replace multiple assets to achieve an identified objective from investing the network and (b) business-as-usual (BAU) replacements that the revenue allowance would include as BAU repex.
- How an identified need can be safety-driven, which we have illustrated by providing a new worked example. This new example recognises submissions from CCP20, ENA, Energy Queensland, SAPN and TransGrid that considered the draft guidance provided insufficient/unclear direction on this area.
- Estimating costs unique to repex projects. We have provided some high-level guidance on this area under section 3.5 of the RIT guidelines. To complement this, we are providing some more detailed direction in an industry practice application note which we aim to publish in January 2019 as a companion piece to the RIT guidelines.[108]
- Consistent with the position taken in the draft RIT guidelines, we do not provide additional guidance on assessing options that entail a combination of augmentation expenditure (augex) and repex. No submissions opposed this approach, which we took because the AEMC's determination for the repex rule change already indicated that a single threshold would apply to all network investment, whether augex or repex or a combination, except where it was driven by an urgent and unforeseen network need.[109] This simplifies the application of the threshold, as it is no longer necessary to consider

106 AEMC, *Rule determination: National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017*, 18 July 2017.

107 Energy Queensland, *Submission to the draft RIT–D application guidelines*, 7 September 2018, p. 2; PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 8.

108 We have consulted on a draft application note, AER, *Draft industry practice application note: Asset replacement planning*, September 2018.We are finalising the final industry practice application note, which we will make publicly available on our website under https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/industry-practice-application-note-for-asset-replacement-planning.

109 AEMC, *Rule determination: Rule determination: National Electricity Amendment (Replacement expenditure planning arrangements) Rule 2017*, 18 July 2017, pp. 63, 66.

whether the augmentation component of a mixed-purpose investment would exceed the relevant RIT cost threshold.

9.2 Guidance on characterising the base case

The draft RIT guidelines proposed to introduce more direction on how to characterise the base case. Stakeholders have supported this initiative, particularly because characterising the base case can be more nuanced when assessing replacement projects. However, there were several requests to provide clearer direction, which we have incorporated into section 3.3 of the RIT guidelines by clarifying that the base case:

- Should include efficient BAU operating and maintenance expenditure, as supported by CitiPower, Powercor and United Energy.[110] This is also supported by CCP20 and PIAC, which agreed the base case should include expenditure that meets legal obligations and is consistent with efficient industry practice.[111]
- Can also include minor capex below the relevant RIT cost threshold, such as to replace minor components or to conduct minor refurbishments. This incorporates a suggestion from ENA, Energy Queensland, SAPN, TransGrid, which were concerned that the base case described in the draft guidance could be interpreted as only including operating and maintenance expenditure.[112]
- Should consider (among other things) any quantified 'risk costs' consistent with its BAU risk mitigation and management activities and with reference to our 'industry practice application note for asset replacement planning'. This recognises ENA's request to clarify that the BAU base case may also include quantified 'risk costs' consistent with those estimated in the network business's risk cost modelling.[113] We expect network business's risk cost modelling to be informed by our 'industry practice replacement note', which we aim to finalise in January 2019.[114]
- Is about BAU in absence of a credible option to meet the identified need, irrespective of whether the credible option concerns augex or repex. We removed the distinction that featured in the draft guidance of having a 'BAU base case' for repex and a 'do-nothing base case' for augex because this distinction would make little practical difference to the analytical approach, but could create unnecessary complexity. This responds to some stakeholder submissions, like SAPN's, that considered our draft guidance was difficult to interpret.[115]

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110 Citipower, Powercor and United Energy, *Submission re Draft application guidelines for the RIT–T and RIT–D*, 7 September 2018, p. 1.

111 PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 7; CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, p. 8.

112 For example, see ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, pp. 8–9.

113 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 9.

114 We have consulted on a draft application note, AER, *Draft industry practice application note: Asset replacement planning*, September 2018.We are finalising the final industry practice application note, which we will make publicly available on our website under https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/industry-practice-application-note-for-asset-replacement-planning.

115 SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 2.

We did not adopt suggestions from several network representatives that the base case could include capex to replace the asset at the end of its expected life for assets such as secondary systems or assets that pose a safety risk.[116] We consider our expanded explanation of BAU activities to include minor capital works below the RIT cost threshold should go some way to incorporate this suggestion. In any case, we consider it sensible to avoid providing definitive guidance on this area. This is particularly because there may be instances where upgrading or replacing secondary systems or assets that pose high safety risk are, or are a component of, a credible option to address an identified need that should trigger a RIT assessment.

116 For example, see *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 3.

10 Other RIT application issues

This section covers other issues discussed in submissions that relate to how the RITs should be applied. These include guidance on:

- Adding new classes of market benefits;
- The treatment of land;
- Framing the identified need;
- Capturing option value;
- Scenario analysis;
- External policies
- The discount rate;
- The VCR.

10.1 Adding new classes of market benefits

The RIT guidelines:

- Retain the additional guidance we proposed in the draft RIT guidelines on what factors we will consider when determining whether to approve a new class of market benefit.
- Specify that we will approve applications to include changes in fuel consumption, ancillary services costs and competition benefits to be relevant market benefit classes for the RIT–D.

Approving new market benefit classes

The RIT guidelines specify what factors we will consider when determining whether to approve a new class of market benefit. Specifically, we will consider whether the proposed benefit:

- Should already be reflected in another market benefit class. If it is effectively a component of a pre-existing class of benefits, then there is no need to introduce a new market benefit class. In these cases, the RIT–T proponent should consider whether it should perform an additional calculation to add this 'sub-component' into the market benefit class. If it has already captured this benefit indirectly, it should not perform a separate calculation that would result in double counting the value of the benefit.
- Would accrue to a producer, consumer or transporter of electricity in the relevant market. If the class of benefit falls outside the scope of the relevant market, the RIT proponent should not include it in its cost benefit analysis, as this would be an externality.
- Will, due to its nature, occur as a wealth transfer and therefore not affect the net economic benefit that accrues to all those that produce, consume or transport electricity in the relevant market. For clarity, a wealth transfer is where a benefit to one party in the market has a direct cost to another party in the market, such that the total change in net economic benefits across the market is zero.

While AEMO raised that the RIT–T cost benefit analysis would not capture the full range of transmission benefits, we do not consider this to be the case. For instance, we consider the RIT–T should capture the following benefits that AEMO has suggested:[117]

- Managing diversity in renewable resources in terms of both location and fuel source. We consider this is a means to achieve an end (that is, more reliable and secure energy in light of a high penetration of intermittent generation). Benefits relating to energy reliability and security should be captured though measuring changes in load curtailment. Also, benefits of locational diversity might also produce benefits relating to reduced network losses.
- Accessing efficient new sources of electricity supply to maintain reliability as a major proportion of our current fleet retires. As above, the benefits of increased reliability should already be captured in the RIT–T framework. Moreover, accessing efficient new sources of electricity is a means to achieving RIT–T benefits like changes in fuel consumption arising through different patterns of generation dispatch.
- Managing an increased prevalence of extreme weather events. This is a broad point, and depending on the nature of the weather events, this could potentially be captured in a large number of market benefit classes, including changes in load shedding, ancillary services costs and costs to other parties.
- Reducing wholesale market price outcomes through better use of supply and demand assets through congestion reduction. We would expect this benefit would be captured by changes in fuel consumption arising through different patterns of generation dispatch, as well as by competition benefits.

New classes of market benefits relevant to the RIT–D

The final RIT guidelines clarify that we will approve requests for RIT–D proponents to determine that the following market benefit classes, which currently apply to the RIT–T, are also relevant to the RIT–D. These include:

- changes in fuel consumption arising through different patterns of generation dispatch;
- changes in ancillary services costs; and
- competition benefits being net changes in market benefit arising from the impact of the credible option.

In the draft RIT–D application guidelines, we advised RIT–D proponents to apply to include these benefits if they expect them to be relevant and material. The explanatory statement to the draft RIT guidelines, we acknowledged:[118]

> while certain classes of market benefits are more likely occur with transmission rather than distribution investments (and vice versa), it is important to recognise that this is not always the case. For example, with the rise in distributed energy resources and the increased sophistication of demand management capabilities, we can expect that distribution investments will increasingly deliver benefits that we have traditionally seen at the transmission level. Moreover, encouraging distribution and transmission

[117] AEMO, *Submission on the RIT application guidelines draft determination*, 10 September 2018, p. 3.
[118] AER, Explanatory statement: draft revisions to the application guidelines for the RITs, July 2018, p. 42.

> businesses to consider similar classes of market benefits should assist them in considering how they can more proactively work together and use joint planning to address particular identified needs.

We acknowledge submissions from ENA and SAPN that since distributed energy resources can increasingly affect wholesale markets, including market benefit classes relating to generation dispatch and competition benefits as a default would improve regulatory certainty and administrative efficiency.[119] Our commitment in the final RIT–D application guidelines to approve a RIT–D proponent's application for us to consider these market benefits as relevant should improve regulatory certainty. While this commitment would improve administrative efficiency to some extent, administrative efficiency could be further enhanced by waiving this application process. That said, it is our understanding that the RIT–D requires an agreement on the relevance of these market benefits to occur on a project-specific basis. This is where paragraph 7.h. of the RIT–D specifies that:

> …The AER will consider a class of market benefit relevant if the RIT–D proponent has determined it to be relevant a required class of market benefit and we have agreed to it in writing before the RIT–D proponent makes its non-network options report available to other parties. If the RIT–D proponent is not preparing a non-network options report, we must make this agreement before the RIT–D proponent publishes the notice under cl. 5.17.4(d) of the NER.

Given this interpretation, we will consider making this administrative update when we next update the RIT–D itself.

10.2 Treatment of land

The RIT guidelines provide guidance on how to treat the costs of land. This guidance is consistent with our approach in the draft RIT guidelines, and is consistent with the previous guidance provided for the RIT–D[120], and specifies that:

- Given that the cost of land may be a cost incurred in constructing or providing a credible option, the value of land should be included as part of a RIT assessment.
- The RIT proponent should therefore use the market value of land when assessing the costs incurred in constructing or providing credible options.

The RIT guidelines also add some points of clarification, including:

- Strategic land purchases (that is, acquiring an easement in advance of making an investment decision to build on that land) need not trigger a RIT. We hold this view because there may not be a clearly identified need or objective when the network business makes a strategic land purchase. Further, land does not fit neatly within the definition of 'network' under the NER, which is also a prerequisite for the RIT to apply.

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119 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 18; SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 2.

120 See AER, *RIT–D application guidelines*, 18 September 2017, pp. 41–42. While this guidance was not previously provided under the RIT–T, this was a function of the RIT–D being developed after the RIT–T (that is, in 2013 rather than in 2010), around when the treatment of easements was actively discussed. In principle, land should be treated the same between both tests.

This reasoning is consistent with our final decision when we developed the RIT–D in 2013.[121]

- The market value of land should be included in a RIT that explores building on a previously acquired easement. This position differs from ENA's and SAPN's suggestions that RITs should only include costs involving new land/easement purchases.[122] We do not agree with this positon, which would be consistent with treating previously acquired land/easements as sunk costs. In contrast, our position recognises opportunity cost on the basis that land could otherwise be sold —consistent with treating strategic land purchases as investment rather than as a sunk cost. This is consistent with our final decision when we developed the RIT–D, where we noted:[123]

> There may be circumstances in which land acquired by a DNSP [distribution business] may be a sunk cost, for example, when land earmarked for a network option has a value of, or close to, zero. However, given that land is different to other network assets (as it does not depreciate), the fact that it may have been purchased years earlier does not necessarily mean it is a sunk cost.

10.3 Identified need

We have retained our guidance in the draft RIT guidelines that RIT proponents should:

- Clearly articulate the identified need. We proposed this addition given our monitoring of RIT applications has highlighted that the some RITs implicitly define the identified need.
- Articulate the identified need as an objective rather than as a means to achieve that objective. We proposed this addition because we have found that framing the identified need as a means to achieve an objective can deliberately favour the development of credible options towards a particular solution. This suggestion was widely supported in submissions to the issues paper[124], and was supported by PIAC and SAPN in their submissions to the draft RIT guidelines.[125]

The RIT guidelines also extend upon the draft RIT guidelines by:

- Advising that the identified need should be articulated in a customer-focussed manner. CCP20, PIAC and SAPN supported this position.[126] We agree with PIAC's view that framing the identified need in this way should help the 'RIT proposal' demonstrate that the long term benefits to consumers from the proposed options outweigh the costs.

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121 For this and other reasons, see AER, *Final decision: RIT–D and application guidelines,* August 2013, p. 24.

122 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 27; SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 6.

123 AER, *Final decision: RIT–D and application guidelines*, August 2013, p. 23.

124 For example, submissions from CCP20, CitiPower, Powercor, United Energy, Endeavour Energy and Origin Energy generally agreed with our initial view in the issues paper that an identified need should be the result of rigorous, broad research, and should not be biased towards any particular preferred credible option or stakeholder. PIAC stated that the identified need should be agnostic to solution types and providers, and should be cognisant of other potential network needs that might benefit from a common or coordinated solution.

125 SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 5; PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 7.

126 SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 5; PIAC, *Submission to the AER's draft RIT–T and RIT–D guidelines*, 14 September 2018, p. 7; CCP20, *Submission to the AER regarding the draft RIT guidelines and explanatory statement*, September 2018, p. 5.

- Explaining how to describe an identified need driven by safety risk. This suggestion was also raised in submissions to our issues paper[127], which lead us to clarify in the draft RIT guidelines that safety considerations can be articulated as an identified need. However, ENA submitted that this guidance would be clearer if we included a new example on articulating a safety-driven identified need and amended our example in the draft RIT guidelines on how to characterise the base case for a service standard obligation.[128] While we have incorporated some of ENA's suggestions (see section 3.2.1 of the RIT guidelines), the RIT guidelines differ to what ENA proposed to recognise that:
    - A jurisdictional requirement to manage safety risk with the 'As Low As Reasonably Practicable' (ALARP) principle will not necessarily require safety risk be addressed at a net economic cost. This will depend on the interpretation of 'Reasonably Practicable', which will also be related to the nature of the safety risk. In practice, we would expect a safety risk management requirement consistent with the ALARP principle might motivate a RIT proponent to justify applying a gross disproportionate factor, which is reflected in our new example in section 3.2.1 of the RIT guidelines.
    - It is possible that an identified need to address a safety risk could be driven by an increase in consumer and producer surplus. For instance, credible options preventing a safety risk from materialising may also avoid involuntary load shedding.
    - Reliability corrective action imposed by a relevant regulatory instrument could cover a reliability standard or some other service standard in schedule 5.1 of the NER or in an 'applicable regulatory instrument' defined in chapter 10 of the NER. This differs from ENA's suggested amendment, where reliability corrective action imposed by a relevant regulatory instrument could be interpreted as covering either a reliability standard or a safety standard.

10.4 Option value

The RIT guidelines maintain the extended guidance proposed in the draft RIT guidelines[129], which includes:

- Clearer guidance to assist RIT proponents in developing credible options with option value (see section 3.2.3 of the RIT guidelines).
- A clear discussion on option value under the section on uncertainty and risk (see section 3.9.3 of the RIT guidelines).
- A clear in-depth worked example on option value, including the use of decision tree analysis at the end of appendix A of the RIT guidelines.

In developing the draft guidelines, we incorporated suggestions from a broad range of stakeholders.[130] We did not receive any negative feedback on this extended guidance, and

127 AusNet Services put this suggestion forward, and its sentiments were echoed by ENA and Energy Queensland.
128 ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, pp. 24–26.
129 For the previous guidance on option value, see AER, RIT–*D application guidelines*, September 2017, pp. 29–30, 61; AER, *RIT–T application guidelines*, September 2017, pp. 34–38, 74.

these extensions were explicitly supported in submissions from ENA, PIAC, SAPN and TransGrid. However, having considered submissions, the RIT guidelines extend on the draft guidance a little further by also:

- Clarifying that there can be option value in building excess capacity, particularly where there are economies of scale and demand is likely to be higher than expected. This clarification captures the intent of TransGrid's suggestion to also include an example of constructing a new transmission line at a higher voltage than is initially needed when there is a high likelihood that the capacity at the higher voltage will ultimately be used.[131] Following this point, we also clarify that there can be option value in selecting smaller, scalable investments, particularly where investments are irreversible and there is a high likelihood that a low demand scenario will occur. Since network investments are often large, irreversible, and have economies of scale, there is value in carefully assessing risk to see how credible options can be constructed to capture the benefits of such optionality.
- Slightly rephrasing our example under section 3.2.3 of the RIT guidelines on developing credible options with option value to clarify that the distinction between Option (b) and (c) is limited to how Option (c) builds in an option to allow for a relatively low cost expansion if demand growth materialises. This minor rephrasing reflects suggestions from ENA and SAPN, who were concerned that the draft guidance might otherwise be interpreted as suggesting a project with an in-built expansion option must necessarily also constitute the minimum investment necessary.[132]
- Adding guidance to provide further clarity on staged RIT projects based on decision rules. Specifically, AEMO, ENA, SAPN and TransGrid questioned whether subsequent RITs should be required for latter stage investments made consistent with the 'decision rules' included within initial option value assessments.[133] In response to these requests, the RIT guidelines now clarify that RIT proponents should:
    - Transparently update stakeholders on when they make decisions based on their decision rules, such as by updating or providing an addendum to the final RIT report when a new stage of the investment commences
    - Apply a new RIT prior to a subsequent stage of a project commencing if:
        (a) the investment at that stage is sufficiently large to pass the relevant RIT cost threshold; and
        (b) there has been a material change in circumstances beyond the contingencies explored in the RIT when forming the decision rule.

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130 This includes submissions from the AEC, AEMO, CCP20, ENA, Energy Queensland, GreenSync, Jemena Electricity Networks, MJA, SACOSS and SAPN. For specific details on how we incorporated these submissions, see AER, *Explanatory statement: Draft revisions of the application guidelines for the RITs*, July 2018, pp. 26–27.

131 TransGrid, *Submission to draft RIT–T application guidelines*, 7 September 2018, p. 10.

132 SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 5; ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 22.

133 AEMO, *Submission on the RIT application guidelines draft determination*, 10 September 2018, p. 2; ENA, *Draft application guidelines for the RITs: Submission to the AER*, 7 September 2018, p. 23; SAPN, *Submission on Review of the applications guidelines and explanatory statement — RITs*, 7 September 2018, p. 5; TransGrid, *Submission to draft RIT–T application guidelines*, 7 September 2018, p. 10.

10.5 Scenario analysis

We have broadly maintained our position in the draft RIT guidelines on scenario analysis, which was a minor expansion of the previous RIT guidelines. We continue to provide practical guidance on how RIT proponents can use sensitivity analysis to gauge what scenarios they should explore. We also provide the following principles to guide RIT proponents on developing reasonable scenarios:

- Be conscious of the current NEM transformations and reforms, including pricing reforms, demand response markets and innovative products allowing consumers to make decisions based on their own price-reliability preferences.
- Construct scenarios that are genuinely reasonable, in that they comprise internally consistent parameters.
- Have regard to AEMO's work in developing modelling forecasts, scenarios and assumptions, such as the information provided in the ISP.

We consider this minor expansion of the previous RIT guidelines strikes a good balance between different suggestions put forward in submissions to the issues paper, which we discussed in the explanatory statement to the draft RIT guidelines.[134] Since this topic was a not a major focus of submissions on our draft RIT guidelines, we do not discuss it further in this final decision.

10.6 Treatment of external policies

The RIT guidelines broadly maintain the updates proposed in the draft RIT guidelines on how to account for the evolving policy environment, which was largely supported in stakeholder submissions. Compared to the previous RIT guidelines, we:

- Updated guidance on treating costs associated with complying with laws and regulations, which includes environmental policies (see section 3.5 of the RIT guidelines).
- Included guidance in the RIT–D application guidelines that we previously only provided in the RIT–T application guidelines (see section 3.7.3 of the RIT guidelines). This guidance covers calculating market benefits that arise from cost savings in meeting mandated targets. This entails accounting for the effects of existing environmental policies in the market benefits calculation, which assesses how removing network congestion lowers the total cost of delivering an environmental policy set by government. TransGrid's submission on the draft RIT guidelines broadly supported us clarifying that existing policies should be assumed to be met and should be considered if they are expected to materially affect the RIT outcome.[135]
- Updated guidance on accounting for environmental policy uncertainty by including reasonable scenarios in which possible environmental policies would exist that would result in costs and benefits from compliance with the relevant laws (see section 3.8.1 of the RIT guidelines).

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134 See AER, *Explanatory statement, Draft revisions of the RIT application guidelines*, July 2018, section 6.3, pp. 28–29.
135 TransGrid, *Submission to draft RIT–T application guidelines*, 7 September 2018, p. 10.

- Been sufficiently broad to apply to new policies when they arise. For instance, the new RIT guidelines recognise that relevant government policies can be broader than environmental policies (for example, at the time of drafting, the reliability limb of the National Energy Guarantee was being developed).[136] This broad approach was supported by Origin's submission, which considered our guidance on the treatment of policies should be broad enough for RIT proponents to assess policies as they arise.[137]
- Acknowledged that when RIT proponents develop reasonable scenarios, among other things, they should be conscious of relevant policy developments, including those concerning carbon emissions, renewable energy, reliability, energy security and other factors. For example, if the introduction of a government policy (such as the reliability limb of the National Energy Guarantee) could affect the ranking or sign of credible options (or just the ranking, if the identified need was for reliability corrective action), the RIT proponent should include it in a reasonable scenario. We have maintained our draft guidance on this area, and note that AGL supported how our draft guidance specified that sensitivity analysis should be used to consider the impacts of potential market reforms.[138]
- Been consistent between the RIT–T and RIT–D when it comes to calculating market benefits that arise from cost savings in meeting mandated targets.
- No longer referenced the carbon pollution reduction scheme, which was an old policy.

In addition to these updates, the RIT guidelines expand on the draft guidance to recognise that policy uncertainty could cover how current policies might change, as well as how new policies might be introduced. This recognises Origin's submission that requested further guidance on assessing the possibilities of policy withdrawals, including what actions RIT proponents must take, such as re-evaluating RIT options.[139] In response to this submission, we have clarified our previous guidance in:

- Section 3.8.1 of the RIT guidelines on how RIT proponents are to develop reasonable scenarios for performing scenario analysis. The draft RIT guidelines advised that RIT proponents be conscious of policy developments relating to features of the NEM. We now clarify that this consideration applies to both introducing new policies and altering/withdrawing current policies.
- Section 4.5 of the RIT guidelines on when RIT proponents must re-apply a RIT following a 'material changes in circumstances'. Specifically, we have clarified that changes in key assumptions that could cause a material change in circumstances could include, among other things, changes to major policies.

10.7 Discount rate

The RIT guidelines provide guidance on selecting the discount rate, which is consistent with the draft RIT guidelines. Specifically, we guide RIT proponents to:

136 See Energy Security Board, *Overview: Retailer reliability and emissions guarantee*, 7 November 2017.
137 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 1.
138 AGL, *Submission re: Draft revisions of the application guidelines for the RITs*, 13 September 2018, p.1.
139 Origin, *Submission to AER draft determination — Guidelines for the RIT*, 7 September 2018, p. 2.

- Consistent with the RITs themselves, use a discount rate appropriate for the analysis of a private enterprise investment in the electricity sector and consistent with the cash flows that the RIT proponent is discounting. In the explanatory statement to the draft RIT guidelines, we stated that using a discount rate appropriate for analysing a relevant private investment is consistent with AEC's and Delta's views that the discount rate should be similar to that used for commercial return calculations on an equity basis (that is, a market-based discount rate).[140]
- Consistent with the RITs themselves, use the regulated cost of capital as the lower bound for the discount rate. In the explanatory statement to the draft guidelines, we stated that this approach was consistent with CCP20's suggestion that private sector hurdle rates exceed their cost of capital.[141] While CitiPower, Powercor and United Energy's submitted that the regulated cost of capital should be used for the discount rate more broadly, we suggest using it as the lower bound.[142] While the regulated cost of capital reflects the network business's opportunity cost of capital, it is still important to evaluate how credible RIT options perform under a commercial discount rate. Using a commercial discount rate to evaluate transmission related benefits (a) is consistent with aiming to measure benefits in a market environment, (b) promotes competitive neutrality since commercial discount rates would apply to electricity generators, and (c) is consistent with how network users fund network investments and bear the risk of benefits not eventuating.[143]
- As a default, use the same discount rate for different credible options to assess a given identified need. However, we provide RIT proponents flexibility to depart from this default if they provide clear evidence for doing so and show how this affects the ranking of credible options. Our decision to maintain this guidance recognises that submissions from AGL, CitiPower, ENA, Powercor, United Energy and PIAC supported the draft RIT guidelines on this point.
- Explore: (a) whether to include reasonable scenarios with different discount rates, and (b) illustrating boundary values for discount rates at which the preferred option changes. We included the latter point following CCP20's submission to our issues paper, which suggested that RIT proponents should then discuss the plausibility of those boundary values occurring and analyse this risk from a consumer perspective.[144]

10.8 Value of customer reliability

The VCR represents the economic harm to customers per megawatt hour that arises from an involuntary loss of electricity supply. Selecting an appropriate VCR is becoming more important, particularly with an increased focus on system security.

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140 AER, *Explanatory statement: Draft revisions of the application guidelines for the RITs*, July 2018, p. 34.

141 AER, *Explanatory statement: Draft revisions of the application guidelines for the RITs*, July 2018, p. 34.

142 Citipower, Powercor and United Energy, *Submission re Draft application guidelines for the RIT–T and RIT–D*, 7 September 2018, p. 2.

143 These benefits of using a commercial discount rate were considered when the regulatory test was developed. See Ernst and Young, *Final report - Review of the assessment criteria for new interconnectors and network augmentation*, March 1999, pp. 33–34.

144 CCP20, *Submission to the AER re Issues Paper: Review of the application guidelines for the RITs*, 9 April 2018, p. 19.

The RIT guidelines provide guidance on VCR that is largely consistent with the draft RIT guidelines, which advise on:

- What factors RIT proponents should have regard to when considering what VCR to apply. This includes things like reliability preferences and factors that cause VCR to vary.
- How RIT proponents should use VCR estimates that are up-to-date, fit for purpose, based on a transparent methodology and published by an independent expert. It explains that currently the VCR derived from AEMO's 2013-14 NEM-wide VCR study should meet a number of these criteria.[145] It also recognises that we will become responsible for calculating VCR from 31 December 2019, and that we are an independent, expert source.[146]Moreover, we will derive VCR estimates and a mechanism for annual updating using a transparent methodology on which we have publicly consulted and will review at least once every five years. In developing the methodology and deriving VCR estimates, we will have regard to the current and potential uses of VCRs.
- How RIT proponents should consider reasonable scenarios with higher and lower than expected VCRs, with the expected VCR having basis in an accepted estimate, such as those produced by AEMO (or, in the future, by us). It also explains how RIT proponents should clearly justify, provide supporting evidence, and consult with us and consumers to which the VCR applies if they make adjustments to an accepted VCR estimate.
- Sensitivity testing the outcome of its cost benefit analysis for changes in VCR and, if applicable, illustrating 'boundary values' for VCRs at which the preferred option changes. This reflect CCP20's submission to our issues paper.[147]

Our decision to maintain the draft guidance recognises that AGL, ENA, PIAC, SAPN and TransGrid generally supported the draft guidance on VCR. This decision also recognises that the draft guidance was sufficiently flexible to allow RIT proponents to use a VCR that is fit-for-purpose. ENA, SAPN and TransGrid supported this flexibility, particularly given that the outcome of the AER's VCR review is currently unknown.

We have intentionally taken a principled rather than prescriptive approach in the draft and final RIT guidelines. For instance, we advised that RIT proponents should use VCR estimates that meet the criteria of being estimates that an independent expert has made publicly available, are up-to-date, fit for purpose, and based on a transparent methodology. The draft and final RIT guidelines flag that we would expect any future VCR estimates we provide would meet these criteria.

145 https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Value-of-Customer-Reliability-review.

146 Information on our VCR review can be found on our website under https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/values-of-customer-reliability-vcr.

147 CCP20, *Submission to the AER re Issues Paper: Review of the application guidelines for the RITs*, 9 April 2018, p. 19.

A Response to submissions on draft guidelines

This is a summary of the key points raised in submissions on our draft RIT guidelines, as well as our response to those points. We received the following 17 submissions:

1. AGL
2. Australian Energy Market Operator (AEMO)
3. Australian Energy Council (AEC)
4. CitiPower, Powercor, United Energy
5. Clean Energy Council (CEC)
6. Consumer Challenge Panel 20 (CCP20)
7. Delta Electricity (Delta)
8. Energy Consumers Australia (ECA)
9. Energy Networks Australia (ENA)
10. Energy Queensland (EQ)
11. Origin Energy (Origin)
12. Public Interest Advocacy Centre (PIAC)
13. SA Council of Social Services (SACOSS)
14. SA Power Networks (SAPN)
15. Snowy Hydro
16. The Energy Project
17. TransGrid

We have grouped our summary of submissions into key issues, including:

- How to use the ISP within the RITs;
- How to account for HILP events;
- How to treat external funding within the RITs;
- Issues relating to repex, including forming the base case;
- Guidance on stakeholder engagement; and
- Other points.

Table 1 summarises submissions relevant to how RIT proponents should use the ISP to inform their RITs.

Table 1: Submissions on using the ISP

Submission	Summary	Response
AEC, Delta, PIAC	ISP-identified projects should not be assumed as committed for the purposes of a current RIT-T (this point has also be phrased as 'the ISP network development path should not be part of the base case'). AEC adds that the cost of properly justifying projects that rely on future market developments is very small compared to the level of investment made. Delta adds that any potential REZ transmission project is not a committed project and typically has little detail around technical parameters or costs. PIAC submitted it would be reasonable to consider the ISP network development	The final RIT guidelines maintain the draft positon that RIT proponents should not assume ISP-identified projects will occur across all reasonable scenarios. Since the draft RIT guidelines, we have explicitly clarified that a RIT proponent should include at least one reasonable scenario where projects in AEMO's network development path do not occur (unless they are already committed or anticipated projects). It is worth noting that we have permitted scope/flexibility for RIT proponents to include anticipated projects that are in the network development path across all reasonable scenarios. We consider this is

	path as part of reasonable future scenarios. The draft guidance reflects that these projects are not committed and would require a RIT-T or other regulatory approval to proceed. If a proponent were to consider these projects as part of the base case, this would equate to assuming that the individual projects which make up the network development path all provide net benefits, ignoring the possible finding that they do not provide net benefits. This is circular logic and skews the result of the RIT-T modelling: conducting a cost benefit analysis under the assumption that the project provides net benefits.	consistent with the previous RIT-T application guidelines which advised that, anticipated projects should be included in all relevant states of the world, based on the reasonable judgement of the transmission business, and note that any anticipated project would be highly likely to occur, based on how they are defined.[148]
AEC	While a group of projects can satisfy an identified need, the relationship between projects in this group must be proven and strong, rather than using this to justify weak projects that are approved using a strong project's expected returns.	The NER allow a RIT to apply to a group of projects to address an identified need. It is worth noting that if one component has a negative net economic benefit, it is not necessarily a weak project being masked by a strong project if the different components of the integrated solution are complementary projects. However, the economic efficiency of combining complementary projects should still be illustrated through performing the cost benefit analysis under the RIT.
AEMO	The draft guidance to classify the ISP network development path projects as modelled projects entails re-prosecuting the ISP modelling. Concerned that the broad caveats in section 3.4.1 of the draft RIT guidelines are likely to undermine transmission businesses' confidence in their ability to rely on ISP modelling for the RIT.	We no longer require RIT proponents to treat ISP projects as 'modelled projects'. However, we now encourage RIT proponents to include, where this would have a material impact, at least one reasonable scenario where projects in the network development path: (1) do not occur (unless they are already committed or anticipated projects); and (2) do occur (noting that projects in the network development path may not be material enough to warrant this exploration, particularly for smaller, intra-regional projects). The final RIT guidelines are slightly less caveated on using ISP inputs than the draft. However, some caveats are important for allowing RIT proponents to consider stakeholder input, use new information, consider material changes in circumstances, and test reasonable scenarios that the ISP did not explore but are integral to that specific RIT project.
AGL	Supports the draft guidance on how RIT-Ts can capture the ISP, which strikes the right balance by providing high level descriptors without embedding the ISP as	The final RIT guidelines are broadly consistent with our draft guidance in this area, although strengthen the link between the RITs and the ISP slightly

148 Anticipated projects are defined in AER, *Final: RIT–T*, June 2010, para 18; AER, *Final: RIT–D*, August 2013, para 23.

	the exclusive transmission map.	more than in the draft (see our response to AEMO's submission above).
CCP20	Agrees that ISP results and assumptions should be critical inputs to RIT-Ts. Further iterations of the ISP might provide evidence that allows RITs to follow the existing process at a faster pace, but this faster pace should not be at the expense of the key elements of the RIT, including defining the identified need in terms of consumers' long term interests, appropriate stakeholder engagement and a reasonable opportunity for non-network service providers to contribute meaningfully to the process.	We agree with this submission. We consider we have reflected these principles in both the draft and final RIT guidelines.
CEC	Welcomes the draft guidance on incorporating the ISP, but also sees scope to incorporate the ISP further in the final RIT guidelines. RIT proponents should be allowed to treat the projects in AEMO's recommended pathway as committed when applying a RIT–T. CEC considers this change would not require changing the NER, but also supports further framework changes outside the RIT guidelines review.	The final RIT guidelines are broadly consistent with our draft guidance. While we strengthen the link between the RITs and the ISP slightly more than in the draft, we do not go as far to recommend that projects in AEMO's network development path be treated as if they were committed (although we suggest they could reasonably be considered in all reasonable scenarios if they meet the definition of being 'anticipated').[149] For more details on how we have strengthened the relationship between the ISP and RIT relative to the draft RIT guidelines, see our response to AEMO's submission above.
Delta	Does not support RITs including benefits from ISP projects without rigorous independent assessment. The ISP is a high-level examination of potential future NEM development based on a limited number of scenarios. RIT proponents must undertake their own assessment using assumptions consistent with its own models along with rigorous evaluation of the benefit of enabling renewables to connect in the identified region by comparison to other geographical locations.	The final RIT guidelines support RIT proponents undertaking their own cost benefit analysis and using assumptions and forecasts that are transparent and from a reputable and independent source. However, we advise that the ISP would be a useful starting point for developing assumptions to use in a RIT analysis and recommend that if the ISP is formalised in the NER and/or NEL, this material should be used as a default for assumptions. Several key criticisms of the inaugural ISP (such as limited consultation and testing of critical assumptions required for greater economic rigour) should be addressed when a formal ISP framework is developed. Moreover, there is value in RIT proponents forming assumptions with regard to a single independent expert source, relative to adopting inconsistent assumptions via different models, which would reduce the transparency of the cost benefit analysis.

149 See paragraphs 18–20 of the RIT–T for definitions of committed, anticipated and modelled projects.

ECA	ECA submitted that the ISP and REZs are about guiding government investment in transmission and private investment in generation rather than fast tracking the process for consumer-funded transmission projects. It is important to maintain a strong RIT framework for the ISP, in accordance with the Finkel Review.	We agree with ECA's characterisation of the Finkel Review recommendations, although Finkel was also open to the RIT potentially taking a different form. We acknowledge that a framework for formalising the ISP is in development, and recognise that while the cost benefit analysis for inter-regional network investments might take a different form to the RIT, the core features of the RIT must be retained to promote the NEO.[150]
ENA, TransGrid	Welcomes the draft guidance on using the ISP, which will enable a faster RIT–T process. However, this will need to go further to break the investment deadlock in delivering strategic transmission investments. TransGrid submitted the ISP recommended development pathway should form the base case in all reasonable scenarios, otherwise it would be difficult to complete a RIT–T for strategic investments in a practical and timely way. ENA requested the AER consider amending its guidance to establish that all Group 1 and Group 2 ISP projects be included in the base case, where relevant, as these are considered necessary in the short to medium term. Where ISP projects are more uncertain or contingent on certain events (such as the Group 3 projects), then it is appropriate that they only be included in some reasonable scenarios. TransGrid submitted that if the AEMO's network development path does not form the base case, RIT proponents would need to model multiple combinations of potential developments; and it would be easy for interested market participants to selectively challenge scenarios and assumptions, disrupting the process.	It is not clear that there is an investment deadlock in delivering 'strategic transmission investments', but the AEMC and the ESB) are currently exploring these potential issues.[151] It is worth noting that the RIT has not impeded any priority projects identified under the ISP, although some RIT–T proponents have used their discretion to either not commence or delay commencing a RIT–T cost benefit analysis on ISP identified projects when they could have commenced this assessment. While the final RIT guidelines strengthen the relationship between the ISP and the RITs, this is not as strong as TransGrid and ENA have requested. See our response to AEMO's submission above on this point. We expect RIT proponents to leverage off AMEO's modelling, which will reduce the analytical/computational burden on transmission businesses. AEMO has made and should continue to make its modelling inputs and assumptions available. Also, the final RIT guidelines should reduce the scope for disputes once it is appropriate for RIT proponents to use ISP assumptions as a default (which is after the ISP has been included in the NEL and/or NER).
The Energy Project	Co-investment opportunities have value. That is, generators and governments should be allowed to lower the risk to consumers of ISP investments (especially REZs).	We acknowledge this view and consider it is supported by our positon on the treatment of external funds.
Origin	Supports the AER's draft guidance on how to treat the ISP. Welcomes a	We have made Origin's suggested clarification, which is consistent with our

150 For our view of these key features, see our submission to the AEMC's *Coordination of generation and transmission investment options paper* dated 24 October 2018 under https://www.aemc.gov.au/sites/default/files/2018-10/AER.pdf . For our view on how the core features of the RITs promote the NEO, see section 4 of this final decision.

151 See AEMC, *Options paper: Coordination of generation and transmission investment*, 21 September 2018; ESB, *Converting the ISP into action*, 21 September 2018.

	clarifying sentence, under Clause 3.4.1, stating that RIT proponents should not solely rely on the ISP for identifying credible options to satisfy the identified need. Origin also supports guidance being given that the most up-to-date information should be used where data has been superseded or changed. Origin also supports that the AER may need to update the RIT guidelines later on if the NER/NEL are later changed to give the ISP a formal role.	intent in the draft RIT guidelines. The final RIT guidelines specify that it would be reasonable to depart from ISP assumptions (even if the ISP is included in the NER/NEL) if there has been a material change in circumstances such that data in the most up-to-date ISP has been superseded or changed. We expect to explore updates to both the RIT guidelines and the RITs themselves if the RIT provisions in the NER are revised.
PIAC	Supports alignment between the RIT–T and ISP, but notes that these perform different (yet related) functions. RITs are better able to examine alterative options (including deferred timing) in detail and drive more active discussion with stakeholders. RITs also require the proponent to articulate the identified need in terms of impacts on consumers rather than purely a system optimisation exercise. PIAC supports the ISP as a starting point for RIT modelling, but the proponent should still select inputs, use the most up-to-date information available, and conduct modelling which is both appropriate and proportionate to the identified need. If RIT exemptions are granted on any ISP project, this should only be on a case-by case basis. Further refinements to AEMO's ISP modelling processes in subsequent editions may materially change the size, location and timing of ISP projects. REZs should not be fully underwritten by consumers as per the current regulatory framework. Rather, generators, governments or network businesses should underwrite at least part of these assets as they are speculative investments.	We agree with PIAC's observation on the respective roles of the ISP and RIT–T under the current regulatory framework. We acknowledge that the current regulatory framework will likely be amended to give a role for the ISP. AEMO's ability to apply the ISP in a way that allows it to effectively examine alternative options and engage with stakeholders are important considerations when determining whether future ISPs can effectively take on the cost benefit analysis function of the RITs for inter-regionally significant projects. The final RIT guidelines also support using the ISP as the starting point for forming inputs and assumptions, but state that this information should be used as a default (with departures limited to reflecting more updated information) if the ISP is included in the NER/NEL. The RIT guidelines do not contemplate exemptions on the basis of the ISP. We acknowledge this point, which is an important consideration for when considering frameworks to support REZ development. The AEMC is consulting on this as a separate (although related) issue to the RIT and ISP.[152]
SACOSS	SACOSS's core concern is relying too much on the ISP when applying a RIT–T, and considers there are risks of using the ISP to ease the analytical burden of the RIT–T.	We understand that there are both risks and benefits to relying on the ISP. We also note that the benefits of using the ISP are greater than easing the analytical burden and also go to assist RIT proponents in taking a NEM-wide perspective and provide a relatively independent expert source for assumptions. While the final RIT guidelines support RIT proponents using information in the ISP, they also

[152] See AEMC, *Options paper: Coordination of generation and transmission investment*, 21 September 2018, pp. 69–88.

		encourage RIT proponents to consult on and test the economics of RIT projects, and to depart from the ISP assumptions when there is supporting evidence and reason to do so.
Snowy Hydro	Snowy Hydro welcomes the AER's view to encourage RIT proponents to use the ISP analysis as a starting point to ease the analytical burden in applying RITs. Snowy Hydro considers projects that are subject to a final project commitment and support a strategic storage initiative should be able to use ISP modelling inputs and assumptions (that is, there is no need to add additional scenarios in the RIT analysis for these projects). Snowy Hydro raises concerns with the timeliness of the RIT–T for strategic investments. While it appreciates the RIT–T's gatekeeper role, Snowy Hydro also recognises it causes 'chicken and egg' concerns. Snowy Hydro appreciates this RIT guidelines review falls within the scope of the current NER, but flags that it supports NER changes for strategic projects (and recommends considering the applicability of the US Order 1000 approach to Australia).	We have maintained our draft guidance to encourage RIT proponents to use the ISP analysis as a starting point, and note that the benefits of doing this go beyond easing the analytical burden. We support the RITs being applied to assess projects on their net economic benefits, without bias towards factors such as technology or ownership. The reasonable scenarios considered in a RIT should have regard to, but should not necessarily be limited or driven by, the ISP. This scenario analysis should fall on the materiality and relevance of the risks to the project under assessment. We recognise this is a live issue being contemplated as part of the AEMC's and ESB's work.[153] The AER supports finding ways to streamline or remove any unnecessary duplication that may exist under current regulatory approval processes. However, we note that a large RIT–T can be undertaken in about one year,[154] which is reasonable given these projects' costs, complexity and risks to electricity consumers.

Table 2 summarises submissions relevant to the treatment of HILP events.

Table 2: Submissions on the treatment of HILP events

Submission	Summary	Response
AEC, Delta	Weighting HILP events to account for a perceived social 'premium' would be a misleading distortion. HILP events are highly unlikely to be fully foreseen and are subjective to quantify. Then they can be seen and quantified, the appropriate solution is through control schemes and operational practices, rather than the building of assets. AEC states that the AER could require RIT proponents exploring HILP events to demonstrate that no other solution to the event is feasible and that the project	The RIT guidelines do not support weighting HILP events by a social premium. The RIT guidelines encourage RIT proponents to explore the robustness of credible options to different risks. In performing this analysis, RIT proponents should explore the viability and effectiveness of control schemes, non-network options and operational practices to manage or respond to those risks. This should encourage RIT proponents to explore whether non-network solutions

153 See AEMC, *Options paper: Coordination of generation and transmission investment*, 21 September 2018; ESB, *Converting the ISP into action*, 21 September 2018.

154 For example, TransGrid's 'Powering Sydney's future' took about one year from the consultation report to the final report.

	cannot create a new mode of failure. Delta suggests appropriate incentives should be in place so non-network solutions can compete to provide security services under the circumstances.	should provide energy security services. The RITs help non-network solutions to compete by promoting competitive neutrality, as well as consultation with non-network service providers under a transparent process.
AEMO	Recommends further considering how to establish the weightings for HILP events, particularly where the event has not happened before. Alternatively, there may be scope for more qualitative assessments for investments with multi-objective criteria (such as providing resilience in the face of extreme weather events). This might be more transparent than an approach that relies on judgement calls to attribute probabilistic weightings. The decision making framework for these more strategic assessments could be considered under the broader ESB work.	Section 3.9.1 of the final RIT guidelines maintain the previous flexible guidance on selecting probability weightings. The RIT guidelines do not restrict RIT proponents by prescribing that probability weightings must be formed on the basis of historical events. While qualitative assessments can have value, we consider a similar value can be gained through sensitivity testing, although we consider sensitivity testing would allow for greater clarity and transparency. We have expanded our guidance on HILP events to explain how risks associated with these events might be considered through sensitivity testing, as well as through scenario analysis.
CCP20, PIAC	If a RIT proponent uses a non-standard VCR to reflect specific impacts of HILP events, its reasons must be transparent, defensible and consulted on early with relevant consumers/other stakeholders. CCP20 added that there must be supporting evidence for the change. Also, the chosen VCR should be sanity checked through 'reverse engineering' the input assumptions. The analysis should also identify and include alternative, lower cost mitigation strategies for reducing the stated risk. While the 2017 COAG EC RIT–T review referenced the SA 'black system' event as a HILP event, multiple factors contributed to this HILP event and there were relatively low-cost actions available to restore power and minimise the probability of a similar event occurring. Given this, it is not clear how to model such events, and CCP20 supports the AER's suggested approach. PIAC submitted that the scenario analysis must be reasonable such that the HILP event is based on BAU and efficient industry responses to such events to avoid skewing the modelling.	We agree with these submissions and have incorporated this into the RIT guidelines.
CCP20, Origin, PIAC, SACOSS	Agree with the draft guidance on probability weighting HILP events and using VCR. Origin submitted the AER should also have regard to AEMO's role in	We agree with these submissions, which have informed our decision to maintain the broad position taken in the draft RIT guidelines. In response to Origin's suggestion, the final RIT guidelines also state that when exploring the economic

	determining new ‘protected events’. CCP20 saw a role for including HILP events in scenario testing where doing so is logical and has reasonable supporting data on which to define the HILP event and assign it a reasonable probability.	impacts of HILP events, RIT proponents should, among other things, recognise the different factors influencing the impact of certain HILP events (e.g. AEMO’s role in determining new ‘protected events’).
CCP20, PIAC	CCP20 and PIAC do not support the ENA's suggestion to re-weight HILP events by re-estimating the VCR by applying multiples. CCP20 submitted that, to the extent network businesses reference regret theory, wider consultation on how to apply this theory should occur so it is applied symmetrical. For example, arguably, regret theory might suggest network businesses overestimate the benefits of network investment relative to non-network investment/extending asset lives. PIAC added that weighting HILP events by more than their probabilities would be opaque and could allow RIT proponents to reverse engineer particular outcomes, undermining the RIT's ability to transparently determine the most efficient outcome.	We have maintained the draft guidance in advising RIT proponents to use a VCR that is appropriate to the duration and range of customers that the event would affect. We note that if there is supporting evidence, it might be reasonable to use a higher VCR for a HILP event. Networks' reference to 'regret theory' did not provide a convincing reason to support higher weightings to HILP events. While the draft guidance was too definitive in stating that weighting HILP events differently to their probability of occurring would 'have no reasonable economic basis', we still consider that weighting HILP events differently to their probability of occurring is more likely to distort the RIT outcome and undermine transparency.
ENA, SAPN, TransGrid	The AER should allow RIT proponents to propose weights for HILP scenarios that would align the benefits from avoiding HILP events in a way that is consistent with community expectations, where they have evidence to support those weights. Moreover, considering how to 'better weight' HILP events would also address the COAG EC's direction for the AER to consider how to better weight HILP events in line with community expectations. ENA and SAPN suggest that such an approach is consistent with economic theory as it enables highly adverse outcomes to be avoided in a way that minimises regret. ENA also provide a worked example to support its suggestion and submits that any departure from probability weightings would need to be justified, evidence-based and supported by stakeholders. Allowing this flexibility would not disadvantage smaller scale options (e.g. control schemes) as the RIT analysis must consider whether these would have a higher net economic benefit. TransGrid notes that VCR is unable to appropriately value HILP events as VCR has methodological limitations, such as	If electricity consumers have higher reliability preferences for HILP events, VCR should capture this. The final RIT guidelines state that we are willing to support higher VCRs associated with HILP events if this is consulted on and there is supporting evidence. It is not clear that COAG EC's reference to 'weighting' is a direction to move away from probability weighting the likelihood events. In our view, it would be just as consistent with COAG EC's suggestion for a different weighting to be applied through a different VCR, or by us encouraging RIT proponents to include HILP events in a reasonable scenario in the first instance. In our view, regret theory does not provide a convincing reason to support weighting HILP events differently to their probability of occurrence (see our response in the row above on regret theory). We do not incorporate ENA's example as we are not incorporating its suggested guidance. If there are limitations in VCR estimates, we will explore these when developing a methodology for estimating VCR as part

	not considering the propensity for consumers to place a higher value on avoiding HILP events.	of our ongoing review.[155]

Table 3 summarises submissions relevant to how to treat external contributions within the RITs.

Table 3: Submissions on external contributions

Submission	Summary	Response
AEC, Delta	External funds should not increase the net economic benefit of an investment. AEC submits that government contributions should not be treated asymmetrically in this regard. The draft position invites governments to distort the investment framework through 'top-up' payments, after the cost benefit analysis is complete. This would game the RIT–T and could strand generator investments made in good faith or be used to shift an investment away from the option that maximises the net economic benefit. AEC notes that parties have the option of pursuing the funded augmentation path for investments that might not pass a RIT. Delta submits that RITs should apply to all investments over the capital cost threshold and that external funds are not a market benefit unless they increase consumer and producer surplus across a range of scenarios.	The position in the draft guidelines, which we maintain in the final RIT guidelines, is consistent with the RIT being a market-wide cost benefit analysis. Our position promotes electricity consumers only funding network expenditure that goes towards increasing consumer and producer surplus in the NEM (that is, expenditure that is efficient from a NEM perspective). A NEM-specific cost benefit analysis should not hinder governments from achieving their objective to maximise net social (rather than market) benefits. Allowing external funds from governments to increase the net economic benefit of projects effectively allows non-NEM benefits to be captured in the analysis, whilst ensuring that electricity consumers only pay for efficient expenditure associated with their electricity supply. This should not affect generation development differently to funded augmentations. However, compared to fully funded augmentations, partially funded augmentations should promote a more efficient allocation of who pays for what benefits (that is, electricity consumers fund market benefits and taxpayers fund social benefits).
AEMO	Agrees that external funding contributed by government should be treated as a reduction in the costs associated with a project for the purposes of the RIT–T. There may also be merit in treating generator contributions as external funds as this reduces the costs borne by customers and creates a mechanism whereby market signals inform transmission planning decisions. However, under the current open access regime, generators will not necessarily have an incentive to contribute.	We have maintained this aspect of our draft guidance. The reduction in the required outlay to the network business from receiving a capital contribution from a generator would be offset against the cost to that generator in a market-wide cost benefit analysis. As PIAC have previously submitted, if a generator funds a project, this could still be recovered from electricity consumers via the wholesale component of electricity.

155 The project page for our VCR review can be found under: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/values-of-customer-reliability-vcr.

CCP20, PIAC	Supports the AER's position that the relevant cost threshold for whether a RIT applies is the amount funded through regulated revenues. It is not necessary for the cost threshold test and the subsequent evaluation process in the RITs to align. The RIT cost thresholds meet an initiation threshold question regarding the amount consumers have at risk via the RAB and hence whether it warrants the additional scrutiny and rigour of a RIT. CCP20 explain that, in contrast, once a RIT applies, the focus turns to the evaluation of credible options' wider market costs and benefits in meeting an identified need. Aligning the cost threshold and cost benefit tests would also imply that only capex would be included in the cost benefit analysis and opex costs (related, for instance, to non-network options) would not apply, which would not be desirable. CCP20 requested the AER clarify any ambiguity in the NER in this area as part of its work with the ESB. It should also further elaborate on the worked examples in the draft RIT guidelines.	We acknowledge CCP20's and PIAC's support for our approach proposed in the draft RIT guidelines, which we have maintained in the final RIT guidelines. That is: • The cost threshold test recognises that the purpose of the RIT cost thresholds is an initiation threshold question regarding the amount consumers have at risk via the RAB and hence whether it warrants the additional scrutiny and rigour of undertaking a RIT. • Once it has been determined that a RIT applies, the focus turns to the evaluation of the wider market costs and benefits of the selected credible options to meet the identified need. We will continue to engage in discussions with the ESB on this area, which relate to the market-wide scope of the RIT cost benefit analysis. We have also extended one of the worked examples from the draft RIT guidelines in response to concerns raised in other submissions.
CCP20, PIAC	Support the AER's position that once the RIT applies, there is a market wide cost benefit analysis that reflects the costs and benefits that will accrue, ultimately to electricity consumers. Under the market-wide test, the NER directs the AER to distinguish between funds transferred between market participants and funds provided by a third party such as a government body. PIAC submitted that funding from a registered participant within the NEM would still be included in the RIT cost benefit analysis as it would ultimately be recovered via consumers' electricity bills. Funding from outside the NEM would effectively improve the net benefits of the option as a smaller portion of the total project cost would be recovered via consumers' electricity bills. PIAC submitted that government revenue raised via a progressive tax system recovers costs far more equitably as it considers a households' ability to pay. Also, the RIT is set up as a NEM-wide test rather than an economy-wide test. If external funds were to negatively affect an option's net benefit, then it would follow that any external benefits (e.g.	We acknowledge CCP20's and PIAC's support for our approach proposed in the draft RIT guidelines, and agree with the reasons they have put forward. The final RIT guidelines reflect their positon.

	creating jobs) derived as a result of the option should increase the net benefit. Approving investments based on whole-of-economy cost benefit analysis is the purview of governments, rather than the AER or RIT proponents. Similarly, CCP20 submits that allowing non-market funds to increase the net benefit of the option is consistent with the direction of the NEO. The NEO focuses on delivering outcomes in the long term interests of electricity consumers in the NEM rather than some broader societal benefit. To the extent a government perceives there is a societal benefit from a network investment, then the government is the party, representing society, to contribute funds to the project. These third-party funds will in turn, be net beneficial to the NEM.	
CEC, CitiPower, Powercor, United Energy, ENA, SAPN, TransGrid	The AER should allow deducting funding from any source (whether from a party within the electricity market or external) from the capital costs of an investment, both for when assessing whether the investment meets the relevant RIT threshold, and when applying the RIT. CEC does not consider external funds from market participants are a strict wealth transfer as this has already been netted of the regulated costs. ENA and SAPN submitted that preventing RIT proponents from taking funding from market participants into account would present a barrier to joint ventures. This is problematic as increasingly, network investments can also provide other non-regulated services to parties across the supply chain. ENA and SAPN found it problematic that external funding was treated differently for threshold identification and the net market benefit assessment.	We have maintained our draft position in this regard. In a NEM-wide cost benefit analysis, the reduction in the required outlay by the network business receiving a capital contribution from a market participant will be offset against the cost to that market participant in providing that contribution. A market-wide cost benefit analysis has the role of identifying projects that maximise market-wide net economic benefits. It does not have a role in dictating the optimal allocation of costs and benefits within the market, and should not prevent such joint ventures from occurring. Our extended example in section 3.11.1 of the final RIT guidelines highlights that a market participant's contribution may form a reasonable basis for RIT proponents to consider whether there might be market benefits that they did not previously capture (potentially due to oversight or immateriality). We do not consider this problematic for the reasons articulated in submissions from PIAC and CCP20. The RIT threshold test looks at whether the amount consumers have at risk via the RAB (that is, network capital costs) warrants the additional scrutiny and rigour of a RIT. In contrast, once a RIT applies, the focus turns to a NEM-wide efficiency assessment where market-wide costs and benefits are evaluated.
Origin	It would be prudent to apply the RIT analysis without factoring external funding sources to highlight the true costs of the	This is a sensible suggestion that we have incorporated into the final RIT guidelines.

	project and to maintain the integrity of the RIT. If the project is not economically sound without external funding, the RIT analysis will provide the third party with a greater understanding of the investment required to make it economic.	
SAPN	Since the RIT's ultimate aim is to identify projects that will be funded through regulated charges, contributions that reduce these charges should be considered. The AER's position on wealth transfers is relevant where the overall benefit to a market is neutral, but contributions from electricity market participants may have additive rather than neutral effects. For example, a co-contribution might address both the identified and an unregulated need (such as participating in the FCAS market), but the unregulated project might only be feasible when delivered on the distribution network. The AER's position appears inconsistent with its distribution connection charging guideline and the NER connections framework, which encourage/require distribution businesses to seek proponent contributions toward network costs arising from their connection. If the AER maintains its current position, it must clarify how this interacts with connection charging frameworks. SAPN provide an example relating to a network support payment and also suggest that the 'need' of the contributing party should be explored in the RIT (e.g. their need might be to connect whereas the 'identified need' might be to address load growth).	The RIT's objective is to promote efficient investment in the NEM, which will provide long term market efficiency benefits in the long term interest of consumers. A NEM-wide cost benefit analysis achieves this objective. If a project has 'additive benefits' that are also market benefits, these should already be captured in the NEM-wide cost benefit analysis. We have extended our example in section 3.11.1 of the RIT guidelines to provide guidance on how to account for external funding from a market participant that receives an additional benefit. We do not see these positions as inconsistent, but rather as serving different functions (although both ultimately promote the NEO). Requiring investments to pass a RIT serves the function of promoting overall market-wide efficiency. The function SAPN has articulated in the connections framework is about an efficient allocation of costs between parties. Both contribute the NEO, but one is targeting total welfare while the other is targeting the distribution of wealth. This could be seen as analogous to the role of revenue determinations versus tariff structures.

Table 4 summarises submissions on forming a suitable base case when applying a RIT.

Table 4: Submissions on repex, including the base case

Submission	Summary	Response
CCP20, PIAC	Supports the draft guidance, particularly that the base case must be a credible option which includes expenditure that 'meets legal obligations or is consistent with efficient industry practice'. There have been issues when the RIT includes a non-credible do-nothing base case. PIAC would like additional guidance on defining and treating replacement programs to promote consistency between network businesses. CCP20 also submitted that the draft guidance was	We have maintained this component of our draft guidance. The final RIT guidelines provide greater clarity on how we define replacement programs given we require RITs apply to asset replacement programs above the RIT cost threshold if these assets are addressing an identified need. We have provided a high-level example of what would and would not constitute an asset replacement program (see section 2.2 of the final RIT guidelines).

	unclear on how to treat replacing a fleet of assets as part of a coordinated program to address risk of failure where the program exceeds the relevant RIT cost threshold. CCP20 recognise there were several grey areas, including replacement for 'safety' reasons and treating costs where some smaller ongoing investment in monitoring or inspections is required to maintain safety or functionality.	We have included guidance on safety-driven identified needs. We also explain that when characterising the base case, RIT proponents should incorporate credible BAU expenditure relating to the deteriorating assets to manage safety risk, environmental risk and equipment protection to the extent this expenditure meets legal obligations or is consistent with efficient industry practice. RIT proponents should also consider any quantified 'risk costs' consistent with its BAU risk mitigation and management activities and with reference to the AER's 'industry practice application note for asset replacement planning'.
Citipower, Powercor and United Energy	The base case for replacement RITs should be a credible BAU option where the asset(s) is kept in service for as long as viable, rather than being a hypothetical case where the asset is kept in poor condition and no credible option is implemented. E.g. where practical, a credible BAU base case may include changes in operating practices and additional monitoring and maintenance to manage the risk from continuing to operate deteriorating asset(s).	We agree with this position, which is consistent with the final RIT guidelines.
Citipower, Energy Queensland, Powercor and United Energy	Citipower, Powercor and United Energy submit that at some point the asset may have to be replaced or retired, so the credible BAU base case may also include the retirement or replacement of the asset. Similarly, Energy Queensland submitted that a BAU base case for replacement projects to maintain the poor condition assets without retiring them may not always be feasible, particularly where the primary driver is a safety risk. The draft guidance discusses credible BAU expenditure to manage safety risk, environmental risk and equipment protection to the extent this expenditure meets legal obligations or is consistent with efficient industry practice. However, replacing an asset to manage the safety risk so far as is reasonably practical is a more appropriate base case.	An asset replacement decision that is above the RIT cost threshold is a credible option in of itself. The example in these submissions is effectively a credible option where the capital works are deferred relative to other credible options being considered. This goes against the definition of the base case in the final RIT guidelines. While a base case option may eventually result in a complete and irreparable failure of the poor condition element and very high volumes of expected unserved energy, what is important from the perspective of a RIT assessment is that the base case provides a clear reference point for comparing the performance of different credible options.
ENA, Energy Queensland, SAPN, TransGrid	BAU expenditure might include minor capex (such as replacing minor components or minor refurbishments), whereas the draft guidance implies this would only include opex. The AER should clarify that where a BAU base case is adopted, the expenditure in the base case may include minor capex as well as opex. ENA and TransGrid add that for a RIT conducted on replacing part of an asset	This is reasonable as minor capex could occur as part of BAU activities to effectively manage the asset to keep it functional for as long as economically viable. We have adopted ENA's proposed addition (italicised): 'in this instance, the base case must incorporate operation and maintenance expenditure *and any minor capital expenditure (below the [RIT–T or RIT–D] threshold)* required to allow the

	fleet (such as secondary systems), the BAU base case may include capex to replace that asset at the end of its expected life as this reflects prudent business practice. Similarly, SAPN submitted that secondary systems (e.g. substation protection) require specific consideration. Where there is a legal requirement to maintain or construct a secondary system, its replacement or acquisition should form the base case. Even where there is no legal requirement, acquiring or replacing a secondary system should form the base case to avoid modelling unrealistic or impractical states of the world.	ageing element to remain in service'. Our expanded explanation of BAU activities to include minor capital works below the relevant RIT cost threshold should go some way to incorporate this suggestion. We recognise there may be instances were upgrading secondary systems is a component of a credible option to address an identified need, so we have chosen not to provide prescriptive guidance on this point.
ENA, Energy Queensland, SAPN, TransGrid	Welcomes the draft guidance on how safety obligations can drive an identified need. Recommends expanding example 4 in the draft RIT guidelines to cover developing an identified need driven by safety-related compliance. SAPN noted that in clarifying a safety-driven identified need, the draft guidelines pointed to an identified need driven by a service standard requirement.	We have expanded our guidance in this area and have provided a worked example that is a variation of ENA's suggestion (for a further explanation, see our response to ENA's submission on 'identified needs' in Table 6).
ENA	The AER should clarify whether its statement about 'the trigger point for the timing of the base case' is referring to the optimal timing of a credible option. This statement is not included in the draft RIT–D application guidelines. If the AER is going to provide this guidance, it should be broadened to include identified needs where there may not always be a monetised service cost in the base case. It would also be helpful for the AER to clarify that the BAU base case may also include expected damage for assets that pose an explosive failure risk or environmental risk (risk costs). ENA suggests adding that the 'BAU' base case may also include: quantified 'risk costs' consistent with those estimated in the network business's risk cost modelling. The BAU base case for repex may reflect a credible option in some circumstances, and requiring that no credible option be included in the base case may result in time consuming modelling that will not influence the final RIT outcome.	We acknowledge that this sentence was confusing and should have referred to the trigger point for the timing of the 'credible option' rather than the 'base case'. We have made this amendment and have also included this in the RIT–D application guidelines. The final RIT guidelines clarify that when forming a BAU base case, RIT proponents should consider (among other things) any quantified 'risk costs' consistent with its BAU risk mitigation and management activities and with reference to our 'industry practice application note for asset replacement planning'. The RIT–D application guidelines allow RIT–D proponents to compare the performance of different credible options against another credible option where the identified need is for reliability corrective action, which addresses this concern. However, this is not permitted for the RIT–T under the NER. In any case, we are not convinced that the additional leniency afforded in the RIT–D materially reduces the effort on modelling as forming an identified need and developing credible options requires an understanding of the counterfactual (that is, a BAU base case). Moreover, reporting what this BAU base case is useful for providing transparency.

Energy Queensland	The AER should clarify its view on applying RITs to multiple low value assets across multiple geographically disperse locations. The AER has suggested a RIT–D will apply if multiple assets of the same type are replaced across multiple locations in the same year, if the RIT–D cost threshold is met and these assets are addressing one identified need. It is unclear whether replacing assets across multiple geographically dispersed locations would be addressing one or multiple identified needs.	The final RIT guidelines provide greater clarity than the draft guidance on how we define replacement programs in the context of our guidance for RITs to apply to asset replacement programs above the RIT cost threshold if these assets are addressing an identified need. We have provided a high-level example of what would and would not constitute an asset replacement program in this context (see 2.2 of the final RIT guidelines).
SACOSS	Supports the draft guidance for assessing efficient replacement projects.	We have broadly maintained the draft guidance.
SAPN	Supports clarifying what constitutes a base case for repex projects, noting the draft guidance is difficult to interpret. The draft guidance only refers to deterministic reliability standards in characterising reliability corrective action and fails to recognise other aspects, like safety. The AER should clarify how to treat service risks where an asset might serve a function required by a regulatory instrument, but there is no stipulated level of probability of failure that cannot be exceeded. The AER should clarify the scope of its caveat, 'the BAU base case should include credible expenditure on a deteriorating asset, as long as this meets legal obligations or is consistent with efficient industry practice', given efficient industry practice often involves proactive condition-based replacement.	We have revised this section of the RIT guidelines to provide greater clarity. The final RIT guidelines are broader on this area as recognise that the instrument driving reliability corrective action might by a reliability standard or some other service standard that is set out in schedule 5.1 of the NER or in an applicable regulatory instrument as defined chapter 10 of the NER. While our 'industry practice application note for asset replacement planning' will support proactive condition-based replacement, it will also support making these decisions based on economic life and encourage credible expenditure on deteriorating assets to prolong asset life where efficient. The final RIT guidelines and our note on replacement planning should be consistent in this regard.[156]

Table 5 summarises submissions relevant to the stakeholder consultation components of the RIT.

Table 5: Submissions on stakeholder consultation

Submission	Summary	Response
AGL	Welcomes the draft guidance on consumer and non-network engagement, and considering further credible options without bias.	The final RIT guidelines retain this aspect of the draft guidance.
CCP20	Raised the importance of managing stakeholder engagement when there are multiple RIT processes.	The final RIT guidelines encourage RIT proponents to be aware of the demands placed on stakeholders when there are multiple consultation processes on foot.

[156] While the industry practice application note is currently being developed, we do not anticipate us changing this position, which was discussed in AER, *Draft industry practice application note: Asset replacement planning*, September 2018.

	Suggests considering introducing a propose-respond model for major RIT projects, similar to regulatory determinations. This would enhance certainty for stakeholders, unlike the current process where dispute resolution represents the only formal stage for consumers to engage with the AER on a RIT. Supports the AER considering the benefits of a propose-respond model when working with the ESB on future RIT reforms.	They also encourage strategies such as early engagement or being flexible to consider suggestions made outside written submissions. The NER requires RIT proponents to provide a summary of and commentary/response to submissions received on its draft/final RIT reports.[157] As such, this 'propose-respond model' is between RIT proponents and their stakeholders, rather than the AER and stakeholders. It is not clear that changing the level of AER involvement in RITs would be practical or beneficial, given the AER already has a large role in the revenue setting and contingent project processes. However, if regulatory reforms mean that the ISP can direct investments, it might be beneficial to explore applying this kind of model as part of the ISP development process.
CitiPower, Powercor and United Energy, ENA	It is important to encourage non-network proponents to engage with networks early on to avoid undue delays. ENA suggested we provide guidance on this. CitiPower, Powercor and United Energy submitted that engaging early with networks allows non-network proponents to understand the risk profile of addressing a specific identified need, including the cost of mitigating the risk. This helps non-network proponents propose solutions in a way that avoids disagreements and delays.	We see value in this suggestion. The final RIT guidelines now add that proactive, early engagement might minimise the effort required later by better equipping prospective non-network proponents to propose more suitable or effective credible options. We targeted this new guidance at RIT proponents rather than non-network businesses because RIT proponents are responsible for applying the RITs and are the main audience for the RIT guidelines.
ECA	ECA welcomed the greater emphasis on consumer engagement and transparency in section 1.4 of the draft RIT guidelines. ECA submits it is important that regulators be clear on how the outcomes of engagement will be used in regulatory decision making. ECA cited the Powering Sydney's Future RIT–T as an example of how this level of engagement works in practice. ECA proposes that there should be an expectation that RIT proponents give adequate weight to consumer suggestions and perspectives. Further, RIT proponents should also take into account suggestions from outside of written submissions, recognising the constraints on some consumers in providing written submissions.	We have maintained this increased emphasis. We have clarified that a best practice approach to engagement should reduce the scope for disputes and increase our ability to fast-track further assessments relating to that RIT project. While this goes some way to incorporate ECA's suggestion at a high-level, we will still need to consider the merits of revenue proposals and RIT applications on a case-by-case basis. We have incorporated this suggestion by encouraging RIT proponents to be aware of demands placed on stakeholders when there are multiple consultation processes on foot. E.g. the final RIT guidelines state that strategies such as early engagement or being flexible to consider suggestions

[157] See NER 5.16.4(k)(2) and (v)(2), 5.17.4(j)(3) and (r)(1)(ii).

	ECA submits that within the RIT guidelines, the AER should require RIT proponents to convene a consumer reference group whose role would include providing a report to the AER on how well it believes the RIT proponent has taken into account consumer suggestions.	made outside written submissions might prove beneficial. The final RIT guidelines clarify that RIT proponents' efforts to understand broader consumer views might include convening a consumer reference group for large RIT projects. We do not fully adopt ECA's suggestion by making this a requirement, as we would be unable to enforce such a requirement under the NER.
ENA, SACOSS	Generally support the AER's proposed guidance on more meaningful stakeholder/consumer engagement. ENA supports how this guidance builds on the AER's consumer engagement guidelines with suggesting some 'best practice' actions for the RITs.	The final RIT guidelines retain this aspect of the draft guidance.
Origin	Supports the draft guidance for RIT proponents to clearly set out the reasons for cancelling a RIT.	The final RIT guidelines retain this aspect of the draft guidance.
PIAC	To prove RIT investments are in the long term interest of consumers, it is essential that the RIT modelling can be scrutinised. The AER should require network businesses to share detailed modelling, inputs and assumptions with interested stakeholders. Potential confidentiality concerns should not be a barrier as sensitive data can be anonymised and/or shared on a confidential basis.	We have maintained the draft guidance to specify that it is best practice for RIT proponents to publish relevant documents showing detailed modelling, inputs and assumptions used for their assessments. While, the NER do not oblige RIT proponents to make this level of detail publicly available, we have tried to incorporate PIAC's suggestion by advising that RIT proponents should use their best endeavours to address potential confidentiality concerns that might prevent them from making data or modelling information available. E.g. RIT proponents should explore whether they can aggregate, anonymise or redact information, or share it with requesting parties on a confidential basis.
TransGrid	Supports the draft guidance on consumer and non-network engagement, including greater emphasis on early engagement, providing transparent and user-friendly data where feasible, and understanding broader consumer views. TransGrid noted that when it did not make submissions publicly available for Powering Sydney's Future, this was because they were commercial in confidence. TransGrid considers there would be value in expanding demand management innovation incentives to transmission networks.	The final RIT guidelines retain this aspect of the draft guidance. We understand that while some submissions were confidential, others were not (or only components were confidential). We have maintained the draft guidance that non-confidential submissions should be published and if there is a confidential submission, RIT proponents should explore whether to make a redacted or non-confidential version publicly available. The RIT guidelines are unable to introduce demand management incentive scheme or innovation allowance for transmission. Stakeholders interested in this should explore proposing a rule

		change to the AEMC.

Table 6 summarises points made in submissions that are not captured in the tables above.

Table 6: Other submissions on the draft RIT guidelines

Topic/ Submission	Summary	Response
Purpose of the RITs	AEC emphasises that an important purpose of the RITs is to provide a predictable network development framework around which competitive investments in the energy market may be made with confidence. While the draft RIT guidelines reference this, they only do this in the context of network businesses considering credible options. PIAC supported the draft guidance, including that while the RIT promotes competitive neutrality, this is as a means of achieving the NEO rather than a goal in itself. AEMO submitted that a more customer-focussed test would deliver better outcomes.	We have clarified that competitive neutrality also encourages efficient outcomes in the longer-term by supporting contestable market development by promoting a predictable network development framework around which competitive investments in the energy market can be made without bearing unnecessary risks arising from inefficient investment. While we have extended our wording on the benefits of competitive neutrality, we maintain the nuance that competitive neutrality is a means to achieving the NEO rather than a goal in itself. We consider the RITs are customer focussed and submissions from customer representatives show strong support for the RITs and their objectives. Section 2.1 of the RIT guidelines explain how the RITs promote the NEO. Moreover, the final RIT guidelines should promote a stronger customer-focus than the draft guidance as they state that RIT proponents should frame identified needs as a proposal to consumers.
Subsequent reviews relating to RITs	AEMO requested the AER clarify that it will undertake a further review of the RIT–T application guidelines after the ESB completes its work to convert the ISP into an actionable plan, so that the guidelines remain fit for purpose. The Energy Project suggested the AER consider how it can facilitate a summary review of all RITs, identify trends/issues, and inform any framework changes.	We clarify that if the RIT–T provisions in the NER change, we will need to review the RIT–T and the application guidelines. We agree that the Energy Project's suggestion would be a valuable piece of work for us to undertake, but this would occur outside of this RIT guidelines review.
Investments in information and communications technology (ICT)	CCP20 notes that utilities' major ICT investments are often integrated with the risk management processes inherent in considering repex proposals or demand management in addressing network augmentation needs. ICT investment is not currently being considered as part of the RIT frameworks, but the AER may wish to consider the future integration of	We are open to exploring this area further, as we expect ICT will have an increasingly important role in the NEM. For this RIT guidelines review, we note that when the AEMC finalised the repex rule change, it explained that, 'the rule does not extend the regulatory investment tests to assets which do not form part of the network

	ICT into the RIT framework.	such as IT and communications systems…It is not designed for general business capital expenditure such as IT and communication systems which is appropriately assessed by the AER as part of the revenue determination processes'.[158]
Aligning cost-benefit analysis and cost recovery	The Energy Project's experience is that the allocation of costs and benefits between regions is important to consumers. Interregional transmission use of system (IR-TUoS) charging is relevant, but the RIT–T does not require including the impacts of IR-TUoS or how costs and benefits will be allocated across regions. This information would help consumers engage in the RIT process. PIAC submitted that RIT proponents must consider the division of expected costs and benefits between consumer groups rather than purely in aggregate to ensure there are no significant cross-subsidies, which are more likely to be problematic for investments on interconnectors, major flow paths, or close to the borders between meshed networks. Misalignment between the cost benefit analysis and cost recovery is a limitation of the RIT. PIAC submitted that while IR–TUoS charging is relevant, it may be better suited when a minor portion of costs is recovered from an adjacent region. The AER and AEMC should review the arrangements allowing networks to allocate costs to an adjacent network to ensure they remain appropriate where significant benefits accrue in the neighbouring region.	We have maintained the draft guidance, which is consistent with the NER in this area. This requires RITs to take a NEM-wide approach. As PIAC suggest, issues around how costs and benefits are divided between consumer groups will likely to be more relevant for investments with inter-regional impacts. It is worth noting that the AEMC is currently reviewing whether the cost benefit analysis for inter-regional investments will be applied by AEMO via the ISP in the future, rather than by transmission networks via the RIT–T.[159] In our view, the harm that IR–TUoS seeks to address aligns with the concerns that stakeholders have raised.[160] If consumer representatives are concerned with the effectiveness of IR–TUoS, this should be explored, as indicated by PIAC. Such a review will be complex, fall outside the scope of the RIT guidelines review, and would likely require examining the relevant NER provisions.[161]
Option value	TransGrid, PIAC, ENA and SAPN generally support how the draft guidance expanded on the previous RIT guidelines. TransGrid suggests the AER include an example of constructing a new transmission line at a higher voltage than is initially needed when there is a high likelihood that the capacity at the higher voltage will ultimately be used. Relatedly, ENA and SAPN recommend the AER	The final guidelines broadly reflect the draft guidance on option value. The final guidelines now explain how option value benefits of 'building larger' are likely to be higher where there are economies of scale and where a high demand scenario is likely. Conversely, the option value benefits associated with smaller, scalable investments are likely to be

158 AEMC, *Rule determination: National electricity amendment (replacement expenditure planning arrangements) rule 2017*, July 2017, p. 65.

159 See AEMC, *Options paper: Coordination of generation and transmission investment*, 21 September 2018, pp. 14–49.

160 See AEMC, *Rule determination: National electricity amendment (inter-regional transmission charging) rule 2013*, p. 28 February 2013.

161 IR-TUoS arrangements are covered under Part ZX or the NER.

	clarify that a project with 'option value' can involve more than the minimum investment amount. ENA suggests changes on page 22 of its submission. AEMO, ENA, SAPN and TransGrid submitted the AER should better clarify that 'decision rules' used to calculate option value for a project that passes a RIT, should be taken to be approved—that is, subsequent RITs should not need to be run for latter stage investments made consistent with the 'decision rules' included within the initial option value assessments.	higher where investments are irreversible and a low demand scenario is likely. We have also incorporated the suggestions made on page 33 of ENA's submission. The final RIT guidelines add that when developing credible options based on decision rules, RIT proponents should transparently update stakeholders when decision rules are applied (for example, by updating the final RIT report when a new stage of the investment commences). RIT proponents should also apply a new RIT at the decision rule stage if (a) the investment at that stage passes the relevant RIT cost threshold, and (b) there has been a material change in circumstances beyond the contingencies explored in the RIT.
Identified needs	CCP20 and PIAC submit that RITs should be framed as a proposal to consumers via the identified need. PIAC added the 'RIT proposal' should demonstrate that the benefits to consumers from the proposed investment outweigh the costs. CCP20 found the draft guidance did not capture its suggestion to frame the identified need as a proposal to consumers. ENA and SAPN generally support the draft guidance and articulating identified needs as an objective and in a customer focussed manner. The AER should better clarify how to describe an 'identified need' driven by a safety risk (and include an example). ENA expands on example 1 of the draft RIT guidelines and example for of the draft RIT–T application guidelines (see section 8.1 of ENA's submission). SAPN suggested the AER recognise that 'identified needs' may seek to achieve multiple goals, even if they have a dominant driver. PIAC supports the principles in the draft guidance, but questions why these principles appear inconsistent between the RIT–T and RIT–D.	We have maintained our draft guidance on articulating an identified need as an objective, and have expanded this guidance on how this objective should be articulated in a customer-focussed manner. We have provided clarity around how safety risk can drive identified needs, including by incorporating this into our worked examples under section 3.2.1 of the final RIT guidelines. SAPN's suggestion is not inconsistent with how RITs are currently applied and we consider it would be unnecessary to expand the RIT guidelines on this area. The principles for articulating identified needs in the RIT–T and RIT–D should be consistent. Differences between the two guidelines should be limited to where there are differences in the respective NER clauses and where we have provided a distribution- and transmission-specific example of an identified need.
Monitoring and compliance	CCP20 submit the AER should implement a framework for monitoring RITs to support continuous improvement (at least in key areas such as repex and ISP projects) and to inform adaption to market and policy changes. The AER should more regularly monitor how the RIT guidelines and APRs are facilitating positive engagement with stakeholders as	We support this suggestion, but recognise that we will need to achieve this through our ongoing compliance activities rather than this RIT guidelines review. We have adopted CCP20's and PIAC's suggestion to guide RIT proponents to frame the identified

	the CCP20 has not seen network businesses proactively and consistently pursue relationships with non-network businesses and other stakeholders. CCP20 and PIAC suggest the AER implement a hold point on the RIT process to ensure compliance with framing the identified need in a consumer-centric way. CCP20 noted the draft guidance does not include the hold point concept, and the AER does not appear to have enforcement powers to make this happen. PIAC questioned whether it would be sufficient to have a hold point after the first report is published and recommended this occurring beforehand (e.g. as part of the APRs).	need as a proposal to consumers. While there are currently no NER provisions under which we could enforce a hold point, we have extended the final RIT guidelines to clarify the value of framing the identified need well from the start of the consultation process as this can avoid biasing a RIT towards particular solutions. We also extend our guidance on how engagement with us, consumers and other stakeholders before publishing the RIT consultation report will facilitate a faster, smoother and better supported RIT process, which would reduce the chance of disputes later on.
Treatment of costs	SAPN welcomes clarification that asset removal/disposal costs (including site rehabilitation) should be included in RITs where relevant. AEC submit that where a credible option requires outages of existing network infrastructure, these costs should be considered in the RIT assessment.	The RIT guidelines clarify that RIT proponents should include costs unique to asset replacement resulting from removing and disposing of existing assets in the costs of all credible options that require removing or disposing of retired assets. AEC's suggestion is consistent with the intent of the RITs in measuring changes in load curtailment, so we have added this clarification to the worked example on valuing changes in involuntary load shedding. It would be a poor measure against the base case if 'negative benefits' associated with a credible option could only be measured after, and not during construction. Moreover, this would be inconsistent given construction costs and positive deferral benefits are estimated and occur before construction is complete.
Treatment of costs – Easements	AEMO requested the AER clarify whether the cost of land associated with a proposed transmission corridor should be based on market value. ENA and SAPN accept the requirement to include any land costs incurred in constructing or providing a credible option. However, this should only apply to new investments including those involving new land / easement purchases. The AER should clarify that the value of land should be included '…to the extent that it has not already been acquired'. CCP20 submitted it would be useful to	We have maintained our current approach that RITs are not required on strategic land purchases (that is, purchasing easements before there is a need to use that land), but that land's market value should be considered when the decision to build on that land is made. This is consistent with our reasoning when we developed the RIT–D.[162] We do not adopt ENA's and SAPN's suggestion, which would be consistent with treating previously acquired easements as sunk costs. In contrast, we guide RIT proponents to recognise

[162] AER, *Final decision: RIT–D application guidelines*, 23 August 2013, pp. 23–24.

	include examples of how the RITs can consider sunk costs, such as previously acquired easements.	the market value of previously acquired land when assessing whether to build on that land. This recognises opportunity cost given the land could otherwise be sold — consistent with treating strategic land purchases as investments rather than sunk costs. We have not provided the example CCP20 suggests given our guidance is that previously acquired easements are not sunk costs.
Credible options - legally feasible	SAPN recommends the AER clarify that distribution businesses can '…exclude any non-network option that would require customers to be disconnected from the distribution network and NEM, where this is not permitted in a given jurisdiction.'	We have not added guidance on top of what section 3.2.2 of the draft RIT guidelines already provided on the need for credible options to be commercially and technically feasible. This stated that an option is technically feasible if there is a high likelihood that it will provide the services that the RIT proponent has claimed it could (and in providing those services, the option should comply with relevant laws, regulations and administrative requirements).
VCR	ENA, SAPN and TransGrid generally support the draft guidance on VCR, and flag it will be important that the AER's VCR estimates are fit for purpose. The AER should retain flexibility for RIT proponents to use a VCR that is fit-for-purpose. SAPN submitted that it is unable to support the AER's VCR work as this is yet to be developed, therefore reasonable variations on the AER's VCR approaches should not be ruled out. AGL supports the AER's draft guidance that requires consistency in using the VCR when assessing credible options. PIAC supports the draft guidance. It also considered the VCR used in modelling must be appropriate to the event being modelled and must transparently account for a range of factors (listed on page 10 of PIAC's submission).	We acknowledge these submissions and have maintained the wording in the draft RIT guidelines, which is sufficiently flexible for this purpose. This refers to the AER's future VCR work as an example, when stating that RIT proponents should use estimates that an independent expert has made publicly available, are up-to-date, fit for purpose, and based on a transparent methodology. It allows for flexibility by advising what RIT proponents should do to justify making adjustments to accepted VCR estimates (e.g. provide evidence and consult with us and the customers to which the VCR applies).
Discount rates	AGL, CitiPower, Powercor, United Energy and PIAC support the draft guidance requiring consistency in the use of the discount rate when assessing credible options. PIAC also supports how the draft guidance provides network businesses the flexibility to justify the need to depart from this. ENA notes that while the draft guidelines allow different discount rates to apply to different credible options (but not as a default), its members do not expect to apply this as the riskiness of options is	We have maintained the draft guidance, on which received broad support in submissions. The final RIT guidelines allow the discount rate to have a basis in the regulated cost of capital by specifying that this should be the lower bound. This should be the lower bound as it is important to evaluate how investments perform under a commercial discount rate. Using a commercial discount rate

	reflected in their price/cost. CitiPower, Powercor, United Energy submit that the appropriate discount rate should be the regulated cost of capital as this is how the actual cost would be measured. The Energy Project submits that the treatment of uncertainty is important and should be reflected in the discount rates. Uncertainty in benefits should also be included in the timing of the elements of these investments and how they are funded.	to evaluate transmission related benefits (a) is consistent with aiming to measure benefits in a market environment, (b) promotes competitive neutrality since commercial discount rates apply to generation, and (c) is consistent with how network users fund network investments and bear the commercial risk of benefits not eventuating.[163] Uncertainty is reflected in the discount rate as this rate must be appropriate for the analysis of a private enterprise investment in the electricity sector and consistent with the cash flows being discounted. Moreover, the lower bound for the discount rate is the regulated cost of capital, which reflects the risk of a benchmark efficient entity through the debt and equity risk premia.
New market benefit classes	ENA and SAPN submitted that market benefit classes in the RIT–T, especially 'generation dispatch' and 'competition benefits' should be included in the RIT–D since distributed energy resources can increasingly impact wholesale markets. Including these classes as a default improves regulatory certainty and administrative efficiency. Similarly, CCP20 suggested the AER consider how to account for the impact of distribution investments on wholesale energy prices and emerging community expectations. AEMO submitted the draft guidance does not recognise the full range of transmission benefits, including to: • Manage diversity in renewable resources in terms of both location and fuel source. • Access efficient new sources of electricity supply to maintain reliability as a major proportion of our current fleet retires. • Manage an increased prevalence of extreme weather events. • Reduce wholesale market price outcomes through better use of	We agree with ENA, SAPN and CCP20 and have stated in the final RIT–D application guidelines that we will consider these market benefit classes to be relevant to the RIT–D. We have retained the previous guidance on how if additional classes of market benefits are relevant, RIT proponents can consider them if we agree to that they are relevant in writing before the consultation report is published. Consistent with the draft guidance, we will consider adding a proposed market benefit class if it is not already reflected in another benefits class and would accrue to a producer, consumer or transporter of electricity in the relevant market. We are not convinced that AEMO's suggested transmission benefits would not already be captured in existing market benefit classes. E.g. managing diversity is not a benefit in of itself, but rather a means to provide a reliable and secure electricity supply. This should already be captured in market benefits classes such as changes in involuntary load shedding.

163 Benefits of using a commercial discount rate were considered when the regulatory test was developed. See Ernst and Young, *Final report - Review of the assessment criteria for new interconnectors and network augmentation*, March 1999, pp. 33–34.

	supply and demand assets through congestion reduction.	
Treatment of policies	Origin supports the AER's draft guidance on the treatment of policies, which should be broad enough for RIT proponents to assess policies as they arise. Origin requests further guidance on assessing the possibility of policy withdrawals, including what actions RIT proponents must take and whether this would require re-evaluating RIT options. TransGrid broadly supports the draft guidance on treating environmental policies. This includes clarifying that existing policies should assumed to be met and should be considered if they are expected to materially affect the RIT outcome. AGL supports the draft guidance on sensitivity analysis, especially that potential market reforms must be considered.	We clarified our guidance in section 3.8.1 on how RIT proponents should be conscious of policy developments relating to features of the NEM. We clarified that this consideration applies to both introducing new policies and altering/withdrawing current policies. Section 4.5 of the final RIT guidelines should cover when a re-evaluation of RIT options is required —i.e. following a 'material change in circumstances'. We have clarified that changes in key assumptions that could cause a material change in circumstances could include, among other things, changes to major policies. The final RIT guidelines maintain the draft guidance on sensitivity analysis and the treatment of policies.