Draft Regulatory Investment Test for Distribution

Submission to the AER from the Victorian Electricity Distribution Businesses

18 July 2013

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Executive Summary

This document sets out the submission of the Victorian Distribution Network Service Providers (DNSPs)[1] on the Australian Energy Regulator's (AER's) draft regulatory investment test for distribution (RIT-D) and application guidelines.

The Victorian DNSPs consider that the draft documents provide a solid foundation for the development of clear and comprehensive guidance on the operation and application of the RIT-D. This submission contains a number of suggestions aimed at improving the clarity of the RIT-D and application guidelines.

The table below summarises the Victorian DNSPs' position on each of the chapters in the AER's draft application guidelines. The remainder of the submission follows the same structure as the AER's draft application guidelines and provides more detailed commentary on each of the matters in the table below.

Summary of comments on the application guidelines

Chapter	Topic	Vic DNSPs' submission
1	Overview of the RIT-D	A number of changes are recommended to address issues noted in the chapters below.
2	Operation and application of the RIT-D	This section provides a good summary of the operation and application of the RIT-D. No drafting changes are recommended.
3	Process to be followed in applying the RIT-D	The Victorian DNSPs would welcome clarification in the application guidelines that submissions to the non-network options report should identify all credible non-network options during the consultation period allowed for that report. The requirement to consult directly with affected customers is unduly onerous. It should be amended to require DNSPs to consult only where there is a material and adverse impact on customers. The guidelines should clarify that it is appropriate for DNSPs to commence processes such as obtaining planning consents prior to commencing the RIT-D. Such action will reduce the risk of having to reapply the RIT-D because of a change in circumstances.
4	Material and adverse market impacts	The Victorian DNSPs support the AER's approach, but have suggested some minor changes to clarify the drafting.
5	Discount rates	The Victorian DNSPs support the AER's proposed drafting.
6	Dispute resolution	The Victorian DNSPs support the AER's proposed drafting.

[1] The Victorian DNSPs are: Jemena Electricity Networks (Vic) Ltd, CitiPower Pty, Powercor Australia Ltd, United Energy Distribution Pty Ltd, and SPI Electricity Pty Ltd.

Chapter	Topic	Vic DNSPs' submission
7	Clause 5.17.4(c) determinations	The screening for non-network options should include load interruption agreements with customers. In addition, the guidance for assessing the credibility of non-network options also applies to network options, and could be included in chapter 8.
8	Credible options	It is recommended that the guidelines should recognise explicitly that where the identified need is not for reliability corrective action: • a "do nothing" base case is, by definition, a credible option; and • the "do nothing option" may maximise net economic benefit, in which case it would be the preferred option.
9	Suitable modelling periods	The Victorian DNSPs welcome the AER's guidance that it is appropriate to allow DNSPs discretion when selecting the modelling period.
10	Market benefit classes	The Victorian DNSPs support the AER's proposed drafting.
11	Valuing market benefits	Drafting changes are recommended to clarify that consideration of wholesale generation market benefits should only be required where the benefits are likely to be material. In addition, further explanatory information in the worked examples would be helpful.
12	Valuing costs	Further clarification is recommended in relation to the valuation of losses, noting that the value may be considerably higher than suggested in the AER's numerical example. Clarifying drafting is also recommended in relation to the treatment of land costs. The Victorian DNSPs do not consider that the strategic acquisition of land should be subject to the RIT-D. Drafting changes are also recommended to clarify that non-compliance with legislative requirements is not a credible option for the purpose of applying the RIT-D.
13	Reasonable scenarios	The Victorian DNSPs support the AER's approach, but have suggested some minor clarifying drafting changes.
14	Sensitivity Analysis	The guidelines should clarify that the appropriate number and choice of reasonable scenarios is a matter for the DNSP.
15	Uncertainty and risk	The RIT-D must be flexible enough to allow the DNSP to exercise its judgment in selecting the preferred option. Additional clarification of the meaning of costs is also recommended.
16	Externalities	The Victorian DNSPs support the AER's proposed guidance.

Introduction

On 5 June 2013 the AER published three documents for consultation purposes:

- a draft regulatory investment test for distribution (RIT-D)[2];
- a draft of the accompanying RIT-D application guidelines[3]; and
- an Explanatory Statement[4].

For convenience, this submission responds to these documents by adopting the same structure as the draft application guidelines, including the chapter titles and numbers.

Appendix 1 of this submission sets out marked-up edits to the draft RIT-D. The suggested drafting changes address the issues identified by the Victorian DNSPs, which are described in the relevant section of this submission.

Appendix 2 notes typographical errors and other minor matters arising in the draft application guidelines.

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2 The AER is required by clause 5.17.1(a) of the National Electricity Rules (NER) to publish the RIT-D.

3 At the same time as the AER develops and publishes the RIT-D, clause 5.17.2 of the NER requires the AER to also develop and publish guidelines for the operation and application of the RIT-D.

4 The AER explains that the explanatory statement sets out the provisions of the NER and the purposes of and reasons for which the draft RIT-D and application guidelines are developed.

1 Overview of the RIT-D

1.1 Purpose of the RIT-D

Page 8 of the draft RIT-D application guidelines notes that, pursuant to clause 5.17.1(b) of the National Electricity Rules (NER), the purpose of the RIT-D is to:

> "...identify the credible option that maximises the present value of the net economic benefit to all those who produce, consume and transport electricity in the National Electricity Market (the preferred option). For the avoidance of doubt, a preferred option may, in the relevant circumstances, have a negative net economic benefit (that is, a net economic cost) where the identified need is for reliability corrective action."

At the AER workshop on the pre-draft guidelines (held on 16 May 2013) the Victorian DNSPs raised for discussion the following observations:

- Maximising expected (that is, probability-weighted) net present value may not always necessarily equate to maximising net economic benefit or economic utility.
- When a probabilistic approach is applied in transmission or distribution planning analyses, "high impact events" are given a very low weighting in the calculation of expected net market benefits, if the likelihood of occurrence is considered to be low. As a consequence, an option that maximises the expected net market benefit may also expose consumers to the risk of significant load shedding.
- The present approach of seeking to maximise the expected net benefits does not recognise that customers and the broader community are likely to consider that being exposed to significant levels of supply interruption is unacceptable, even if the probability of occurrence of such an event is very low.
- It was noted that these matters are currently being addressed in the Australian Energy Market Commission's (AEMC) reviews of transmission and distribution reliability standards, and Australian Energy Market Operator's (AEMO) review of the value of customer reliability (VCR).

The NER requires distribution planning decisions to maximise the net economic benefit. The probabilistic planning approach outlined in the draft RIT-D guidelines seeks to maximise the expected net market benefit. Probabilistic planning implicitly assumes that customers and the broader community are risk-neutral. In other words, probabilistic planning would prefer a 0.001% chance of losing $99,000 (which has an expected value of 99 cents) compared to a certain cost of losing $1.

The Victorian DNSPs consider that the RIT-D guidelines should allow the DBs to make the judgment that an investment option should be preferred even if it does not maximise the expected net market benefit. In the above example, a network investment that costs $1 may be preferable to the $99,000 exposure, even if the probability of occurrence is believed to be 0.001%. The DNSPs would welcome drafting in the RIT-D guidelines that allows judgments to be made, rather than mandating a mechanistic approach.

In appendix A, the Victorian DNSPs have proposed some minor drafting changes to address this point.

1.2 Application of RIT-D to customer-initiated works

The Victorian DNSPs' submission to the AER's January 2013 Issues Paper noted that the RIT-D applies to shared network augmentations associated with new customer connections (NCC). The Victorian DNSPs explained that the AER's connection charge guidelines and the provisions in Chapter 5A of the Rules will ensure that investments associated with the connection are efficient.

In view of these observations, we suggested that the AER should adopt a pragmatic approach in dealing with this issue in the guidelines, by providing for streamlined processes to ensure that:

- the DNSPs' ability to meet the deadlines to provide a negotiated connection offer is not compromised; and

- customer-initiated work (the cost of which may be largely funded through customer capital contributions) is not delayed because of the time required to complete the RIT-D and associated processes.

Section 2.2 of the AER's Explanatory Statement addresses the points made by the Victorian DNSPs, and concludes (on page 10) as follows:

> "Our proposed approach is to maintain the requirements set out in the NER. In accordance with cl. 5.17.4 of the NER, a RIT-D assessment is required under the NER, even if the conduct of the RIT-D would adversely affect the overall timing of a customer-initiated project."

The Victorian DNSPs accept the AER's position that the requirements of the NER must be satisfied. For clarification purposes, it is noted that clause 5.17.3(a)(3) of the NER states that the RIT-D does not apply where the cost of addressing the identified need is to be fully recovered through charges other than charges in respect of *standard control services* or *prescribed transmission services*. Under the NER, a connecting party may choose to obtain the network augmentation as a *negotiated distribution service,* in which case the need to undertake the RIT-D would be obviated.

The Victorian DNSPs remain concerned that new connection works should not be delayed as a result of applying the RIT-D. At this stage, however, we note that the existing NER provisions may provide an appropriate mechanism for addressing this concern. The Victorian DNSPs would welcome the AER's further observations on this matter.

1.3 Allocation of costs and benefits between electricity and other markets

Paragraph 11 of the draft RIT-D states:

> "Any cost or market benefit which RIT-D proponents cannot measure as a cost or market benefit to generators, distribution network service providers, RIT-D proponents and consumers of electricity cannot be included in any analysis under the RIT-D. RIT-D proponents must base the allocation of costs and market benefits between electricity and other markets on the cost allocation principles."

The Victorian DBs cannot envisage circumstances in which it would be necessary to allocate costs and market benefits between electricity and other markets. Subject to any further guidance from the AER, our preference would be to delete the words "allocation of costs and market benefits between electricity and other markets" from paragraph 11 of the RIT-D.

1.4 Commencement of the RIT-D

Page 10 of the draft application guidelines states:

> "Under cl. 11.50.5(e) of the NER, we may determine whether projects have not commenced assessment under the Regulatory Test. We consider that an NSP has commenced assessing a project under the Regulatory Test if, before 1 January 2014, it has:
>
> - published a project evaluation under the former regulations; or
> - identified the project in a published Distribution Annual Planning Report (DAPR); or
> - released a Request for Information; or
> - commenced an option analysis for the project under the Regulatory Test."

The Victorian DNSPs consider that the criteria proposed by the AER to determine whether assessment of a project under the Regulatory Test has commenced are reasonable and practicable.

2 Operation and application of the RIT-D

Chapter 2 of the draft application guidelines provides a good overview of the operation and application of the RIT-D. The Victorian DNSPs have a number of comments on important matters of detail regarding various aspects of the operation and application of the RIT-D. These comments are set out in the relevant sections of the remainder of this submission.

3 Process to be followed in applying the RIT-D

3.1 Stakeholder consultation

Page 15 of the draft application guidelines addresses the consultation requirements for the non-network options report and the draft project assessment report. The guidelines provide the following commentary in relation to the non-network options report:

> "A RIT-D proponent must call for the stakeholders specified in cl. 5.17.4(a) of the NER to make submissions on the non-network options report. RIT-D proponents must provide these stakeholders with at least three months to make submissions from the date that it publishes the non-network options report.
>
> When calling for submissions, RIT-D proponents should clarify that the identification of additional options should predominately occur at that stage of the consultation process. RIT-D proponents should request stakeholders to support any potential credible options they propose and provide it with sufficient information to enable the RIT-D proponent to assess the option's technical feasibility."

The Victorian DNSPs would welcome clarification in the application guidelines that submissions to the non-network options report should identify all credible non-network options during the consultation period allowed for that report. This clarification would ensure that all options (network and non-network options) are considered by the DNSP in identifying the preferred option(s) in the draft project assessment report (DPAR). At present, the drafting suggests that the identification of non-network options 'predominantly' occurs during this consultation process. The Victorian DNSPs are concerned that the late identification of non-network options will lead to an unnecessarily protracted assessment process.

The draft application guidelines also set out the following requirements in relation to identifying the parties that must be consulted:

> "RIT-D proponents should consult with stakeholders throughout all stages of the RIT-D process. RIT-D proponents are to identify the parties they must consult with and invite them to register on the RIT-D proponent's demand-side engagement register. RIT-D proponents must maintain the contact details of the parties that they must consult with. We expect that RIT-D proponents have, or [are] able to develop, sufficient internal capabilities and processes to maintain its demand-side engagement register."

These requirements were discussed at the AER workshop on the draft RIT-D held in Melbourne on 26 June 2013. During that discussion, the Victorian DNSPs noted that they may have insufficient information on hand to identify all parties who may wish to be included in the demand-side engagement register, or in consultation regarding a particular RIT-D application. In light of that discussion, we suggest that in circumstances where a DNSP considers it has insufficient information on hand to identify all parties who may wish to be included in the demand-side engagement register (or consultation regarding a particular RIT-D process), then the guidelines would clarify that the DNSP should publish a notice on its web site inviting such parties to make themselves known to the DNSP. We envisage that any such notice would be published in advance of the publication of a non-network options report, to provide sufficient time for parties to identify themselves prior to the consultation on non-network options commencing.

In relation to the DPAR, page 15 of the draft guidelines also states:

> "The RIT-D proponent must consult directly with potentially affected customers if the proposed preferred option in the DPAR has the potential to have an adverse impact on the quality of service experienced by electricity consumers. This includes anticipated changes in voluntary load curtailment by electricity consumers and anticipated changes in involuntary load shedding and customer interruptions caused by network outages."

The Victorian DNSPs note that any arrangements governing *voluntary* load curtailment would be subject to agreement between the DNSP and the demand-side service provider(s) involved. Accordingly, any decision contemplated by a DNSP that is likely to change the level of voluntary load curtailment would also be subject to the agreement of the affected parties. The requirement for the DNSP to consult in these circumstances is therefore redundant, and should be removed from the guidelines.

In relation to the proposed requirement for DNSP to consult directly with parties affected by a possible reduction in quality of service (including changes in involuntary load shedding), the Victorian DNSPs make the following points:

- A basic tenet of probabilistic planning[5] is that customers must be exposed to some level of expected unserved energy in order for a network or non-network solution to be economically justified. Under this approach, if demand is forecast to increase each year over the planning horizon, then expected unserved energy will increase for all consumers until a network or non-network solution is economically justified. Whilst it is important for all stakeholders to understand the risks that they face under a probabilistic planning approach, it would be impracticable for customers to be consulted directly in such circumstances.

- The example below demonstrates that it would also be unnecessary for the guidelines to require customers to be consulted directly in all circumstances where one group of customers may be exposed to an increase in involuntary load shedding as a result of a decision to implement a project that satisfies the RIT-D.

Example: Impacts of load transfers on different customer groups

Two substations each have an (N-1) rating of 150 MVA and are loaded as follows:

Sub Station	Maximum Demand	Hours above (N-1)	Load Shedding Scheme Armed?	MWh pa at risk
A	260 MVA	1000	Yes	130,000
B	60 MVA	0	No	0
Total	**320 MVA**			**130,000**

A RIT-D has determined that a distribution project is the preferred option to alleviate the constraint on Substation A. The project involves transferring 100 MVA of load from Substation A to Substation B.

The loading after completion of the project is as follows:

Sub Station	Maximum Demand	Hours above (N-1)	Load Shedding Scheme Armed?	MWh pa at risk
A	160 MVA	10	Yes	80
B	160 MVA	10	Yes	80
Total	**320 MVA**			**160**

Existing customers on Substation B are now exposed to a small amount of load shedding, and therefore under the draft application guidelines, this would trigger a requirement for direct consultation with affected customers. However, the residual load at risk is very small, particularly compared to the original total load at risk.

In view of these considerations, the Victorian DNSPs suggest that the guidelines should be revised to require DNSPs to consult with potentially affected customers only if the preferred option has the potential to have a ***material*** and adverse impact on the quality of service experienced by electricity consumers[6]. We note while it is possible that a group

[5] As applied in Victoria in relation to the transmission and distribution networks.

[6] This would be broadly consistent with the requirement to consult with interested parties, as defined in clause 5.15.1 of the NER: "*interested party* means a person including an end user or its *representative* who, in the AER's opinion, has the potential to suffer a material and adverse *National Electricity Market* impact from the investment identified as the preferred option…".

of customers will be exposed to the possibility of a reduction in service quality under the option that meets the RIT-D, we would not expect this situation to arise frequently.

3.2 Reapplication of the RIT-D

Page 19 of the draft application guidelines states:

> "We expect that situations that call for the re-application of the RIT-D under cl. 5.17.4(t) of the NER will be exceptional. Likewise, circumstances where we make a determination to exclude RIT-D proponents from this clause are also likely to be exceptional. For this reason, we will consider these situations on a case-by-case basis when deciding whether or not such a determination would be appropriate."

The Victorian DNSPs concur that situations warranting the re-application of the RIT-D are likely to be exceptional. We welcome the AER's proposed guidance.

Example 3.2 of the draft application guidelines provides an illustration of "material change in circumstances" for the purpose of determining whether the RIT-D should be re-applied. The example cites a situation in which a RIT-D proponent incurs significant community opposition to a proposed overhead line, to the extent that approval will be granted only if sections of the original route are placed underground, increasing the cost of the preferred option. This is identified as an example of a material change in circumstances, thereby requiring the proponent to reapply the RIT-D.

The Victorian DNSPs concur that this would indeed constitute a material change in circumstances, however there are reasonable steps that a DNSP can take to avoid such circumstances arising in the first place. These actions may include: seeking planning consents, project approvals, licenses, including completion and acceptance of any necessary environmental impact statement, and the acquisition of land prior to commencing a RIT-D. Accordingly, it would be helpful if the following sentence were added at the conclusion of Example 3.2 of the draft guidelines:

> "To minimise the risk of these situations occurring, it is acceptable for a DNSP to commence seeking planning consents, project approvals, licenses, including completion and acceptance of any necessary environmental impact statement, and the acquisition of land prior to commencing a RIT-D."

Further comments on matters relating to land and easement acquisition are set out in section 12.4.

4 Material and adverse market impacts

Page 21 of the draft application guidelines states:

> "If a stakeholder has the potential to suffer material and adverse NEM impact from an externality, the AER cannot consider them to be an interested party for the purposes of cl. 5.15.1 of the NER. This is because material and adverse NEM impacts do not consider personal detriment and personal property rights."

While DNSPs agree with the AER's intentions, this statement is potentially confusing because an externality, by definition, cannot be regarded as a NEM impact. The DNSPs

suggest that the first sentence of the paragraph cited above should be re-drafted as follows:

> "If a stakeholder has the potential to suffer material and adverse ~~NEM~~ impacts from an externality, ~~the~~ then that stakeholder ~~AER~~ cannot be considered ~~them~~ to be an interested party for the purposes of cl. 5.15.1 of the NER."

Example 4.2 (on page 21 of the draft guidelines) provides an illustration of impacts relating to personal property rights. It states:

> "The RIT-D proponent has identified a network option as its credible option. Under this option, the RIT-D proponent will build poles and wires. This network infrastructure will run through several different properties. Some of the property owners consider that this action will devalue their property. This would constitute an impact relating to personal property rights. Therefore, we would not consider these property owners as interested parties."

The Victorian DNSPs welcome the clarification provided by the guidelines. We suggest that for the avoidance of doubt, the following words should be added at the end of the last sentence of Example 4.2:

> "however the costs associated with compensating property owners for easements and land acquisition must be included in the cost of the relevant option(s) for the purpose of the RIT-D."

5 Discount rates

Page 23 of the draft application guidelines states:

> "For purposes of regulatory consistency, the method for determining the discount rate is the same as that used for the RIT-T. That is, the discount rate must be appropriate for the analysis of a private enterprise investment in the electricity sector and must be consistent with the cash flows that the RIT-D proponent is discounting. The lower boundary should be the regulated cost of capital.
>
> Different types of RIT-D projects will carry different level of risks, and RIT-D proponents need the flexibility to account for this when determining the discount rate. The RIT-T methodology for determining the discount rate is flexible to allow for adjustment between projects."

The Victorian DNSPs welcome the guidance provided by the AER, noting in particular the need for flexibility. We also note that it would be unusual for variations in the discount rate within reasonable limits to be a key driver of changes in the ranking of options. We would expect that plausible changes in other key variables such as demand forecasts, capital costs of credible options and the value of customer reliability would have a much greater impact on option ranking. That said, it is worth noting that the use of lower discount rates will tend to favour the selection of capital intensive options.

6 Dispute resolution

Chapter 6 of the draft application guidelines provides a useful overview of the operation and application of the dispute resolution arrangements.

The Victorian DNSPs welcome the following clarification provided on page 24 of the draft guidelines regarding the matters that can be disputed:

> "The disputing party may only dispute conclusions made by the RIT-D proponent in the FPAR [final project assessment report] on the grounds that:
>
> - the RIT-D Proponent has not applied the RIT-D in accordance with the NER or
> - there was a manifest error in the calculations that the RIT-D proponent performed in applying the RIT-D.
>
> A dispute may not be raised about any issues in the FPAR which:
>
> - The RIT-D treats as externalities or
> - Relate to an individual's personal detriment or property rights."

7 Clause 5.17.4(c) determinations

As noted on page 28 of the draft application guidelines, 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. The following sections discuss the screening for non-network options and the assessment of whether a non-network option is credible.

7.1 Screening for non-network options

In relation to screening for non-network options, page 28 of the draft guidelines states:

> "Before RIT-D proponents can make a determination under cl. 5.17.4(c) of the NER, they must screen for non-network options. We consider screening to mean that RIT-D proponents must consider all feasible non-network options, such as:
>
> - any measure or program targeted at reducing peak demand, including:
> - improvements to or additions of automatic control schemes such as direct load control
> - energy efficiency programs or a demand management awareness program for consumers
> - installing smart meters with measures to facilitate cost-reflective pricing.
> - increased local or distributed generation/supply options, including:
> - capacity for standby power from existing or new embedded generators
> - using energy storage systems, load transfer capacity and more."

The Victorian DNSPs consider that the current drafting should be extended to include load interruption arrangements with customers, as shown below:

> "We [the AER] consider screening to mean that RIT-D proponents must consider all feasible non-network options, such as:

- ~~any~~ measures or programs targeted at reducing peak demand, including but not limited to:
  - improvements to or additions of automatic control schemes such as direct load control
  - energy efficiency programs or a demand management awareness program for consumers
  - installing smart meters with measures to facilitate cost-reflective pricing
  - agreeing load interruption arrangements with consumers."

7.2 Assessing non-network options as potential credible options

Pages 28 and 29 of the draft guidelines state:

> "When making this determination [under clause 5.17.4(c) of the NER], a RIT-D proponent should assess whether the option (or group of options) would potentially:
>
> - address the identified need
> - is or are commercially and technically feasible. An option is commercially and technically feasible where its estimated costs are comparable to (or less than) other credible options that address the identified need. One exception to this general guidance applies where the credible option (or options) is/are likely to deliver materially higher market benefits. In such circumstances, the option may be commercially feasible despite the higher expected cost
> - can be implemented in a sufficient time to meet the identified need."

The Victorian DNSPs note that the guidance provided by the AER in the above statement is applicable to the identification of credible options regardless of whether they are network or non-network options[7]. It would therefore aid clarity if this definition were to be included in the chapter that provides guidance on the identification of credible options (currently chapter 8 of the draft application guidelines). It would also aid clarity if the current order of chapters 7 and 8 were reversed.

8 Credible options

8.1 Inclusion of a Base Case ("do nothing" option) in the RIT-D

In their submission to the AER's January 2013 Issues Paper, the Victorian DNSPs explained that they apply a probabilistic planning approach, and so there is a need for a base case to be included in the analysis. That submission also noted that the NER does not preclude a DNSP from incorporating a "do nothing" base case in RIT-D evaluations, and the RIT-D guidelines should not preclude this either.

We welcome the AER's consideration of this matter, and we note that page 11 of the Explanatory Statement comments that:

[7] The statement essentially replicates the definition of "credible option" provided in clause 5.15.2(a) of the NER.

> "We propose that RIT-D proponents be allowed to select one credible option to serve as the base case against which other credible options are compared. This may involve comparing credible options against a 'do nothing' base case."

It would be helpful for the guidelines to recognise explicitly that where the identified need is not for reliability corrective action:

- a "do nothing" base case is, by definition, a credible option; and
- the "do nothing option" may maximise net economic benefit, in which case it would be the preferred option.

We note that section 11.2 on page 38 of the draft guidelines now provides for the consideration of a "do nothing" base case if relevant. We have suggested some minor edits to paragraph 5 of the draft RIT-D (shown in Appendix 1) to incorporate a reference to the "do nothing" base case.

8.2 Including option value in a RIT-D

Page 31 of the draft guidelines states:

> "Where there is a material degree of uncertainty regarding future scenarios, and the option/s considered involve a sunk or irreversible action by the RIT-D proponent, the RIT-D proponent could be flexible in responding to changing market developments or scenarios as they emerge. One approach is to consider credible options formed by a group of options that include:
>
> - an initial option that allows the RIT-D proponent to defer expenditure of a more costly option until more information becomes available and
> - a subsequent option that would only be implemented under certain future conditions or states of the world.
>
> When a RIT-D proponent accounts for this value, it is effectively incorporating option value into its RIT-D assessment."

The Victorian DNSPs welcome the AER's clarification of the requirements relating to the incorporation of option value (pursuant to clause 5.17.1(c)(4)(vi) of the NER) in a RIT-D. We regard the guidance as practicable, and consistent with the key principle set out in clause 5.17.1(c)(2), that the RIT-D should not require a level of analysis that is disproportionate to the scale and likely impact of each of the options being considered.

9 Suitable modelling periods

Page 33 of the draft guidelines state:

> "The duration of modelling periods should take into account the size, complexity and expected life of the relevant credible option. It should provide a reasonable indication of the market benefits and costs of the credible option. This means that by the end of the modelling period, the network is in a 'similar state' in relation to meeting a similar identified need to where it is at the time of the investment. This means that the suitable modelling period could vary according to the credible option under consideration. However, to the extent possible, the RIT-D proponent should construct credible options (using individual options) that require assessment under similar modelling periods.

> It is difficult to provide definitive guidance on how RIT-D proponents should implement this principle. However, it is unlikely that a period of less than 5 years would adequately reflect the market benefits of any credible option. In the case of high-cost investments that provide a return over a longer period, it may be necessary to adopt a modelling period of 20 years or more.
>
> When considering longer modelling periods, a RIT-D proponent may find that costs and market benefits may eventually become immaterial due to discounting future costs. Under such circumstances, a RIT-D proponent may exercise discretion when selecting a suitable modelling period so that the RIT-D does not require a level of analysis that is disproportionate to the scale and likely impact of the credible options being considered."

The Victorian DNSPs welcome this guidance. In particular, it is appropriate to allow DNSPs discretion when selecting the modelling period.

10 Market benefit classes

Page 34 of the draft guidelines states:

> "While a RIT-D proponent must consider each class of market benefit specified under cl. 5.17.1(c)(4) of the NER, a RIT-D proponent is not obligated to quantify the benefits that it considers to be immaterial or will not alter the selection of the preferred option."

The Victorian DNSPs welcome this guidance. We note that it is consistent with the principle set out in clause 5.17.1(c)(2), that the RIT-D should not require a level of analysis that is disproportionate to the scale and likely impact of each of the options being considered.

The draft guidelines explain that RIT-D proponents are required to consider whether each credible option could deliver the classes of market benefits listed in clause 5.17.1(c)(4) of the NER. Page 36 of the draft guidelines states:

> "If a RIT-D proponent quantifies an additional class of market benefit in its RIT-D assessment, we will consider it. However, a RIT-D proponent must receive approval before it makes its non-network options report available to other parties. If the RIT-D proponent is not preparing a non-network options report, the AER must provide its approval before the RIT-D proponent publishes the notice of its determination stating that there are no non-network options that are credible options."

The Victorian DNSPs note and accept the AER's requirements regarding the inclusion of classes of market benefits other than those listed in 5.17.1(c)(4) of the NER.

11 Valuing market benefits

11.1 Considering generation (wholesale market) benefits

The draft guidelines suggest that market development modelling will need to be used to determine the choice of modelled projects in each given state of the world. Page 38 of the draft guidelines states:

> "By enabling the derivation of modelled projects in the presence of a credible option and the base case, market development modelling assists in determining the market benefits

> of the credible option in a given reasonable scenario. For example, market development modelling may assist in determining whether, in high, medium or low demand reasonable scenarios, a demand-side option is likely to lead to the deferral (or advancement) of new generation investment compared to other credible options. To the extent it does, this would constitute a positive (or negative) contribution to the market benefit of the credible option in each of those reasonable scenarios."

As noted in previous submissions to the AER, and at the AER's workshop on 26 June 2013, the Victorian DNSPs do not have in-house market modelling capability. This reflects the limited extent to which planning decisions on the distribution network affect the wholesale energy market.

The Victorian DNSPs acknowledge that there may be instances where market modelling is required. For example, a non-network option which involves significant demand reduction may give rise to benefits in the wholesale market (in the form of deferral of new generation capacity, and fuel cost savings). It is appropriate that impacts should be examined in a RIT-D in these circumstances. However, the Victorian DNSPs consider that wholesale market analysis is typically not required in a RIT-D assessment.

The Victorian DNSPs would welcome drafting changes to the RIT-D to clarify that consideration of wholesale generation market benefits should only be included where the benefits are likely to be material. In this regard, it is noted that the draft guidelines already provide that "a RIT-D proponent is not obligated to quantify the benefits that it considers to be immaterial or will not alter the selection of the preferred option".

11.2 Weighting market benefits in each scenario

The draft guidelines propose that:

> "A relative market benefit of a credible option is obtained by [...] weighting any relative market benefits or costs by the probability of each reasonable scenario occurring."

The Victorian DNSPs concur that different outcomes should be accorded different weights in the evaluation of expected net market benefits to reflect their relative likelihood of occurrence. Our detailed comments on the treatment of uncertainty and risk in a RIT-D are set out in section 15 below.

In advance of presenting those comments however, it is noted that Example 10.2 (on page 40 of the draft guidelines) seeks to illustrate an approach to comparing probability-weighted states of the world. We note that some readers are likely to find this example difficult to follow because there is insufficient information provided to enable the reader to gain a clear understanding of the cost categories included in (and excluded from) the calculations. It would also be helpful if the guidelines provided some explanation as to why and how probability weights were adopted for the three scenarios (high, medium and low) in this example.

The Victorian DNSPs suggest that further explanatory information - possibly in the form of a simple table showing each cost and benefit (or avoided cost) category and the amount included in the calculations - should be provided. In a similar vein, we suggest that Example 10.1 could also be clarified if a simple table listing the various categories and values of costs and benefits were to be provided.

12 Valuing costs

12.1 Costs of demand side options

Chapter 12 of the draft guidelines commences by referring to clause 5.17.1(c)(6) of the NER, which specifies the classes of costs to be considered in a RIT-D. The AER subsequently explains (on page 41):

> "In the case of demand-side options, rewards or inducements paid to consumers for voluntary load curtailment could be counted as either (i) a cost of the demand-side option or (ii) a negative market benefit of the option, as in Example 9.2. If (ii) is adopted, then the costs of the demand-side option would be limited to the commission or fees charged by the demand-side aggregator or relevant energy service business."

The Victorian DNSPs concur that the commission or fees charged by the demand-side service provider should be taken to represent the resource cost of that service, for the purpose of the RIT-D.

It is noted that the substance of the passage cited above appears to be that for the purpose of the RIT-D:

- payments made by DNSPs to providers of demand-side services (such as load reduction, and embedded generation) are to be taken to reflect the total resource cost of that service; and

- such payments can be classified as operating and maintenance costs over the operating life of the credible option, in accordance with clause 5.17.1(c)(6)(ii).

For the avoidance of doubt, it would be helpful if drafting along these lines were to be adopted in the guidelines.

It is noted that page 52 (Appendix A) of the draft guidelines also addresses the issue of valuing voluntary load curtailment, and states:

> "The less consumers need to be paid to voluntarily curtail their power use, the lower the negative market benefits from a voluntary curtailment option. This is because in a competitive market, the amount consumers need to be paid to curtail should reflect the real loss of utility they experience from not consuming power."

The Victorian DNSPs concur with the AER's reasoning and position on this matter.

12.2 Valuing involuntary load shedding

Page 55 (Appendix A) of the draft guidelines states:

> "A RIT-D proponent should use a reasonable measure of the value of customer reliability (VCR) in calculating market benefits. A RIT-D proponent should use VCR estimates from a reputable source, such as the VCR used by AEMO for network planning in Victoria."

The Victorian DNSPs welcome this guidance.

12.3 Valuing losses

Appendix A7 of the draft guidelines explains the rationale for considering electricity losses in a RIT-D, and identifies some of the ways in which losses may be reduced. In Example 21, losses are valued at $12/MWh. The example states: "Energy costs after generation are $12/MWh".

It would be helpful if the guidelines provided further explanation and guidance as to how losses should be valued in a RIT-D. In this context, we note our view that losses should reflect the value of electricity in the wholesale generation market. It is important to recognise that this value may vary considerably, especially if reducing losses provides a means of meeting demand at peak times.

12.4 Treatment of land and easement costs

During the workshop on 26 June 2013, the question arose as to whether the acquisition of land for the purpose of possible future network development should itself be subject to a RIT-D. As noted at the workshop, the Victorian DNSPs consider that strategic land acquisitions should not be subject to a RIT-D. Instead:

- the strategic procurement of land and easements by a DNSP for possible future network development should be made in accordance with that DNSP's strategic land procurement program; and

- those programs should be subject to review by the AER, as part of the DNSP's capital expenditure forecasts, at each price review.

Broadly speaking, a decision to acquire land in advance of the construction timetable for a network project is justified in terms of addressing the following risks:

- Urban development leads to higher network costs. For example, undergrounding may be required in circumstances where more restricted urban development would have allowed a less costly overhead solution.

- Increased land acquisition costs. This may result from the future re-zoning of land from agricultural to residential.

- Unexpected project delays. Planning consent is more likely to cause project delays if land acquisition is pursued closer to the construction timelines.

It is recognised that the early acquisition of land is not costless, and the costs of holding the investment must ultimately be met by customers. Strategic land acquisition is therefore a balancing act between the pros and cons of earlier and later land acquisition. The assessment of the net benefits of strategic land acquisition will be influenced by the following uncertainties:

- possible changes in development zoning;

- urban or regional centre boundary growth;

- related infrastructure plans (e.g. local and state government plans);

- environmental, cultural or heritage issues;
- possible future changes in network planning or reliability standards;
- forecast demand for distribution network services; and
- the penetration of distributed generation resources, and the longer term development of the distribution network.

In view of these broad considerations, it is impracticable for a RIT-D to be undertaken in order to assess the net market benefit of strategic land procurement per se. Strategic land acquisition does not involve the types of considerations that arise in relation to a network or non-network solution. Instead, strategic land acquisition is a precursor or facilitator of efficient network investment, and therefore it is different in nature to the network planning decisions that are subject to the RIT-D.

For the avoidance of doubt, it is important to note that the opportunity cost of land will be considered in a RIT-D analysis when a network investment is under consideration. In this way, the full economic cost of each option is considered in a RIT-D analysis, regardless of whether or not a particular easement or parcel of land has already been acquired for the purpose of network development.

In light of the above discussion, the Victorian DNSPs suggest that the draft guidelines should be revised to clarify that:

- Decisions to acquire land or easements for possible future development and in advance of the construction timetable for a particular network project will not be subject to the RIT-D, but may be subject to the AER's scrutiny of a DNSP's capital expenditure forecast at each price review.
- Where a feasible option being considered in a RIT-D involves the use of land already held by the DNSP for the purpose of network development, the opportunity cost of that resource would be included as a cost of the option in a RIT-D analysis.

12.5 The cost of complying with laws and regulations

Page 41 of the draft guidelines states:

> "RIT-D proponents must comply with any law, regulation or administrative requirements However, in some cases, the RIT-D proponent may have a choice as to how it meets these requirements. For example, the RIT-D proponent may lawfully choose to pay a financial amount rather than undertake some other action (which is otherwise necessary to comply with the relevant law, regulation or administrative requirement). If the financial amount is smaller than the costs of undertaking some other action, then the RIT-D proponent may treat this financial amount as part of the costs of such a credible option.
>
> However, any harm to the environment or to any party that is not expressly prohibited or penalised under the relevant laws, regulations or administrative requirements does not form part of the costs or affect the market benefits of the credible option.
>
> The limitation of costs in the RIT-D places the onus on policy makers to explicitly prohibit certain activities or to determine the value on various types of harm and impose financial

> penalties accordingly. It is not the role of the RIT-D to prohibit or penalise certain activities that policy-makers have not themselves determined to prohibit or penalise."

The above drafting appears to suggest that non-compliance is a legitimate and economically rational course of action. The Victorian DNSPs note that considerations of good practice and corporate responsibility dictate that deliberate non-compliance should not be regarded as a legitimate option. We therefore suggest that the AER should review the drafting cited above, to ensure that there is no potential for misinterpretation.

It is noted that paragraphs 19(e) and 21(e) of the draft RIT-D refer to "the magnitude of a penalty (if any) for failing to meet an environmental target or other government-enforced requirement imposed on parties who produce, consume and transport electricity in the market." For the reasons outlined above, the Victorian DNSPs consider that draft paragraphs 19(e) and 21(e) should be removed from the RIT-D.

13 Reasonable scenarios

Paragraph 19 of the draft RIT-D states:

> "A reasonable scenario means a set of variables or parameters that are not expected to change across each of the credible options…"

Similar language appears in footnote 6 on page 37 of the draft guidelines. The intention appears to be that a reasonable scenario applies the same assumptions about key variables and parameters across all options for the purpose of calculating each option's net market benefit. It may therefore be clearer for the provision in paragraph 19 of the RIT-D to state:

> "A reasonable scenario means a set of variables or parameters that are consistent across each of the credible options, for the purpose of calculating the net market benefit of each option."

Page 43 of the draft guidelines clarifies that:

> "A RIT-D proponent only needs to include the additional reasonable scenarios where changes in variables could affect the ranking of credible options."

The Victorian DNSPs welcome this clarification.

It is also noted that the following statement is included in chapter 15 (page 47) of the draft guidelines:

> "Material uncertainty over the future market supply and demand conditions can affect the calculation of the market benefits or costs of a credible option. When this occurs, this should affect how a RIT-D proponent chooses its range of reasonable scenarios. Those reasonable scenarios should reflect the range of potential outcomes."

This statement also provides useful guidance on the identification of reasonable scenarios. We therefore suggest that a statement along these lines be included in chapter 13 of the guidelines.

14 Sensitivity analysis

Page 45 of the draft guidelines state:

> "The impact of sensitivity analysis on the number and choice of reasonable scenarios used to assess a particular set of credible options will vary according to the circumstances surrounding the RIT-D assessment. Further, there may be other approaches for deriving the appropriate number and choice of reasonable scenarios for each set of credible options under consideration."

The guidance provided in chapter 14 on sensitivity testing and selection of reasonable scenarios is helpful. The paragraph cited above confirms that the guidance in relation to approaches for deriving the appropriate number and choice of reasonable scenarios is not binding. This is welcome, however it would be helpful if the guidelines were to state more clearly that determining the appropriate number and choice of reasonable scenarios is a matter for the DNSP, exercising reasonable judgement and having regard to:

- the principle (conveyed in clause 5.17.1(c)(2) of the NER) that the RIT-D should not entail a level of analysis that is disproportionate to the scale and likely impact of each of the options being considered; and
- the guidance provided (on page 43 of the draft guidelines) that a RIT-D proponent only needs to include additional reasonable scenarios where changes in variables could affect the ranking of options.

15 Uncertainty and risk

15.1 Uncertainty regarding market benefits and costs

The draft guidelines recognise that the future costs and market benefits of a credible option assessed under the RIT-D are uncertain, and this uncertainty may have a material impact on selecting the preferred option. The guidelines therefore provide the following directions (on page 47):

> "Associated with each reasonable scenario is a probability corresponding to the likelihood of that scenario occurring. RIT-D proponents are required to probability-weight the market benefits and costs."

The requirement to weight variables by probabilities is different to the provisions of the former Regulatory Test, which did not require probabilities to be applied, but instead stated that an option is considered to satisfy the test if it maximises net market benefits in a majority of scenarios. The Victorian DNSPs note that under that former approach, equal weight is ascribed to all scenarios. We consider that the former approach is inappropriate because although the future is (necessarily) uncertain, it is reasonable to expect that some outcomes are much more likely than others, and so it is inappropriate to ascribe equal weight to each.

The Victorian DNSPs therefore welcome the AER's proposal that in evaluating expected net market benefits under the RIT-D, outcomes should be weighted in a way that reflects their relative likelihood of occurrence.

However, we are concerned that in its current form, chapter 15 of the draft guidelines may be interpreted as implying that investment decision-making under conditions of uncertainty is a mechanistic exercise, in which it is possible to ascribe precise probabilities to different outcomes. In particular, we suggest that care needs to be taken in the drafting of the guidelines to ensure that they do not mandate the application of precise probabilities in the evaluation of costs and benefits, because in many cases there is insufficient data available to ascribe precise probabilities. In this regard, we note that Example 13.1 implies (no doubt, unintentionally) that decision-making using the RIT-D is a straightforward mechanistic process. It conveys a false sense of precision in the use of probabilities by assigning weights of 8%, 32%, 12% and 48% to the 4 scenarios. The guidance provided by this example could be improved if an explanation was provided as to why and how these probability weights have been assigned in this way.

We suggest that the guidelines should explicitly recognise that in reality, sound investment decision-making takes the information provided by analytical tools such as the RIT-D, and applies it in the formation of a reasonable judgement as to the most appropriate course of action. The guidelines should therefore provide for the application of reasonable judgement in RIT-D decision-making, having regard to:

- all of the possible future states; and
- the range of potential outcomes (net market benefits) in each state, in particular those future states that have a low probability but entail the exposure of customers to the possibility of significant supply interruption.

It is noted that in relation to costs, paragraph 3 of the draft RIT-D states:

> "If the RIT-D proponent establishes that there is a material degree of uncertainty in the costs of a credible option, the RIT-D proponent should conduct a sensitivity analysis using the different cost assumptions and weight the sensitivities according to the RIT-D proponent's reasonable view as to their likelihood."

We note that this drafting does not prescribe the assignment of precise probabilities, and we have suggested (in Attachment 1) the adoption of similar drafting in paragraph 6 of the draft RIT-D in relation to the weighting of scenarios for the purpose of estimating market benefits. We consider that it will be more practicable for the RIT-D to permit the proponent to form a reasonable view as to the relative likelihood of particular outcomes, and to set out the basis of that view. For instance, as an alternative to ascribing numeric weights to different scenarios, the RIT-D guidelines should be flexible enough to enable the RIT-D proponent to select a credible option as the preferred option if it satisfies the RIT-D under a majority of scenarios reasonably deemed by the proponent to be 'likely'. We note that in the absence of data, this would necessarily involve some judgement.

The Victorian DNSPs consider that the RIT-D must be flexible enough to enable particular (more likely) scenarios to be given greater weight than less likely scenarios. The RIT-D should provide this flexibility in a way that recognises reasonable judgement needs to be applied to weight outcomes where there is a lack of data to ascribe precise probabilities. As already noted, the guidelines also need to be written in a way that avoids promoting the perception that the RIT-D is a simple mechanistic analysis involving a high degree of precision.

15.2 Further detailed comments on Examples 13.1 and 13.2

Page 49 of the draft guidelines states:

> "The cost of the credible option is the probability weighted present value of the direct costs of the credible option under the different cost assumptions. Where the identified need is reliability corrective action, costs refer to incremental costs above (or below) the base case credible option.
>
> For the avoidance of doubt, 'cost assumptions' is distinct from the reference to costs within reasonable scenarios as used elsewhere in the RIT-D and the draft application guidelines. Here, 'cost assumptions' refers to the costs of each credible option. Elsewhere, in the context of reasonable scenarios, cost assumptions refers to the costs of existing, committed, anticipated and modelled projects that may arise within the relevant reasonable scenario. The direct costs of a credible option may vary for reasons other than the nature of the relevant reasonable scenario. For example, the direct costs of a credible option may be uncertain because they depend on variables such as exchange rates or the price of copper. Similarly, whether a reasonable scenario reflects high or low demand growth is unlikely to affect the costs of a credible option. This is why the RIT-D requires the RIT-D proponent to separately undertake a weighted averaging of the direct costs of a credible option as well as the market benefits of a credible option."

The discussion about the different meanings of 'cost assumption' in the second paragraph of the passage cited above is unclear. We suggest that it should be reviewed and clarified.

In addition, we suggest that references to "direct cost(s) of a credible option" should be changed to "costs directly attributable to the provision of a credible option".

The guidelines should also clarify that:

- it is the forward looking (avoidable) economic costs which are relevant to decision-making; and
- "costs directly attributable to the provision of a credible option" includes the categories of costs listed in clause 5.17.1(c)(6) of the NER, and do not include externalities.

We have included suggested edits to paragraphs 2 and 14 of the draft RIT-D (see Appendix 1) to clarify this matter.

More importantly, the sentence at the end of the second paragraph does not appear to be borne out by Examples 13.1 and 13.2:

- In Example 13.1, the calculation of probability-weighted market benefits is undertaken across four scenarios, two of which involve "high capital costs" and two of which involve "low capital costs". It is not clear whether these different capital cost assumptions apply to the base case or all three options. Presumably, however, the scenarios are defined in this way to reflect the uncertainly regarding costs.
- Example 13.2 is said to follow on from Example 13.1. It includes three cost assumptions (and associated probabilities of occurrence) in relation to the base

case and the other 2 options. It is unclear how these cost assumptions relate to the "high capital costs" and "low capital costs" scenarios in Example 13.1. Moreover, there is no explanation provided as to whether, and if so, how, the results obtained in the two examples are to be combined to derive estimates of net market benefits.

The examples do not assist the reader in forming a clear understanding of the methodology that the AER has in mind. It would be helpful if the examples were reviewed and clarified, to address the points noted above.

16 Externalities

The Victorian DNSPs consider that the guidance provided in chapter 16 of the draft guidelines (including Example 14) regarding the treatment of externalities in the RIT-D is clear.

Appendix 1: Proposed drafting changes to the RIT-D

This appendix sets out changes to the draft RIT-D that are proposed by the Victorian DNSPs. Proposed additional text is shown in blue and underlined. Deleted text is shown in red and in ~~strikethrough~~ format.

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1. The regulatory investment test for distribution

1. The *preferred option* is the *credible option* that maximises the present value of the *net economic benefit* to all those who produce, consume and transport electricity in the *NEM*.[8]

   Where the *identified need* is for *reliability corrective action*, a *preferred option* may have a negative *net economic benefit* (that is, a net economic cost).

   Net economic benefit equals the *market benefit* less *costs*.

1.1 Costs and benefits

Costs

2. *Costs* are the present value of the ~~direct~~ costs directly attributable to the provision of a *credible option*. In determining *costs*, the *RIT-D proponent* must quantify the following classes of costs:

   a. financial costs incurred in constructing or providing the *credible option* including the opportunity cost of any land and easements;

   b. operating and maintenance costs in respect of the operating life of the *credible option*;

   c. the costs of complying with laws, regulations and applicable administrative requirements regarding the construction and operation of the *credible option*; and

   d. any other financial costs the AER determines to be relevant. The AER will consider an additional class of financial cost relevant if the *RIT-D proponent* has determined it to be relevant 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*.[9]

3. If the *RIT-D proponent* establishes that there is a material degree of uncertainty in the *costs* of a *credible option*, the *RIT-D proponent* should conduct a sensitivity analysis using the different cost assumptions and weight the sensitivities according to the RIT-D proponent's reasonable view as to their likelihood.

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8 NER, cl. 5.17.1(b).

9 A RIT-D proponent is not required to separately quantify each class of cost.

Market benefits

4. A *RIT-D proponent* must consider whether each *credible option* could deliver the classes of market benefits specified under cl. 5.17.1(c)(4) of the *NER*.

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5. Where the identified need is not for reliability corrective action, the preferred option must have a positive *net economic benefit* otherwise the preferred option becomes "do nothing" (which would ordinarily be the base case). Under these circumstances, a *RIT-D proponent* must quantify all classes of *market benefits* in consideration where the *RIT-D proponent* considers that:

   a. The applicable *market benefits* may be material; or

   b. The quantification of *market benefits* may alter the selection of the preferred option.

6. A *RIT-D proponent* is required to rank the *credible options according to net economic benefits*.

   a. The market benefit of a *credible option* is calculated by:

      (i) comparing, for each relevant *reasonable scenario*:

         a. the *state of the world* with the *credible option* in place, and

         b. the state of the world in the base case, and

      (ii) weighting the present value of the benefits derived in sub-paragraph (i) according to the RIT-D proponent's reasonable view as to the likelihood ~~by the probability~~ of each relevant *reasonable scenario* occurring.[10]

7. Subject to paragraphs 8-10, *market benefit* includes the following:

   a. changes in voluntary *load* curtailment

   b. changes in involuntary *load shedding* and *customer interruptions* caused by *network outages*, ~~using~~ valued by multiplying the expected volume of unserved energy by a reasonable forecast of the value of ~~electricity to~~ customer~~s~~ reliability (VCR)

   c. changes in costs for parties, other than the *RIT-D proponent*, due to differences in:

      i. the timing of new *plant*

      ii. capital costs

      iii. the operating and maintenance costs.

   d. differences in the timing of expenditure

   e. changes in load transfer capacity and the contracted capacity of *embedded generators* to take up *load*

   f. any additional option value (where this value has not already been included in other classes of *market benefits*) gained or foregone from implementing the *credible option* with respect to the likely future investment needs of the *NEM*

[10] Where a RIT-D proponent does not reasonably consider one reasonable scenario is more likely than any other, it may weight all reasonable scenarios equally.

g. changes in *electrical energy losses*

h. any other class of *market benefit* determined to be relevant by the AER. The AER will consider a class of *market benefit* relevant if the *RIT-D proponent* has determined it to be relevant 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*.

8. With respect to paragraphs 6 and 7, where the *credible option* is for a *reliability corrective action*, a requirement to consider or quantify *market benefits* will only apply insofar as the *market benefit* delivered by that *credible option* exceeds the minimum standard required for *reliability corrective* action.

9. *Market benefit* must not:

   a. include the transfer of surplus between consumers and producers;

   b. include the *costs* which meet the criteria in paragraph 2; or

   c. include any benefits that have already been accounted for in other elements of the *market benefit*. For example, additional option value where this has already been accounted for in other elements of the *market benefit*.

10. A *RIT-D proponent* may quantify each class of *market benefits* listed under paragraph 7 where the *RIT-D proponent* considers that:

    a. any applicable *market benefits* may be material; or

    b. the quantification of *market benefits* may alter the selection of the preferred option.

Further requirements for costs and benefits

11. Any *cost* or *market benefit* which *RIT-D proponents* cannot measure as a *cost* or *market benefit* to generators, *distribution network service providers*, *RIT-D proponents* and consumers of electricity cannot be included in any analysis under the *RIT-D*. ~~*RIT-D proponents* must base the allocation of *costs* and *market benefits* between electricity and other markets on the *cost allocation principles*.~~

12. If a *RIT-D proponent* has received submissions on its non-network options report and/or draft project assessment report (DPAR), it should have regard to these submissions, where relevant, in exercising judgement as to whether a particular class of *cost* or *market benefit* applies to each *credible option*.

1.2 Methods for estimating market benefits and costs

Method for estimating the magnitude of market benefits

13. A *RIT-D proponent* should estimate the *market benefit* from a *credible option* as per paragraph 5 unless the *RIT-D proponent* can provide reasons why this methodology is not relevant in the *DPAR*.

    A *RIT-D proponent* should estimate the *market benefit* of different *credible options* as per paragraph 5 unless *RIT-D proponent* can provide reasons why this methodology is not relevant in the *DPAR*.

If a *RIT-D proponent* expects any benefits will occur outside the *region* in which its *network* is located, the method used for estimating *market benefits* under paragraph 5 must capture these benefits.

Method for estimating the magnitude of costs

14. A *RIT-D proponent* must estimate the magnitude of the *costs* in accordance with paragraphs 2–3. A *RIT-D proponent* may only quantify the ~~direct~~ costs directly attributable to ~~of~~ implementing the *credible option*. A *RIT-D proponent* must not double count *costs.*

1.3 Method and value for specific inputs

15. Clause 5.17.1(c)(9)(iii) of the *NER* requires the *RIT-D* to specify the appropriate method and value for specific inputs, where relevant, for determining the discount rate or rates to be applied.

The discount rate

16. The present value calculations must use a commercial discount rate appropriate for the analysis of a private enterprise investment in the electricity sector. The discount rate used must be consistent with the cash flows that the *RIT-D proponent* is discounting.

17. The lower boundary should be the regulated cost of capital.

1.4 Reasonable scenarios

18. A sensitivity analysis is required for modelling the cost-benefit analysis under the *RIT-D*. In order to run a sensitivity analysis, a *RIT-D proponent* will need to develop *reasonable scenarios*.

19. A *reasonable scenario* means a set of variables or parameters that are consistent ~~not expected to change~~ across each of the *credible options*, for the purpose of calculating the net market benefit of each option, and may include the following:

    a. a reasonable forecast of electricity demand, reflecting assumptions regarding economic growth and climatic patterns[11]

    b. efficient unit operating costs of existing, *committed, anticipated* and *modelled projects* including demand-side and generation projects

    c. avoidable unit costs of *committed*, *anticipated* and *modelled projects*, including demand-side and generation projects

    d. If applicable, the form of any market-based regulatory instrument that may be used to address greenhouse and environmental issues

    ~~e. the magnitude of a penalty (if any) for failing to meet an environmental target or other government-enforced requirement imposed on parties who produce, consume and transport electricity in the market. If such a penalty is not tax deductable, it should be grossed up to its value if it were deductible~~

    f. reasonable forecasts of the value of electricity to consumers, including the value of consumer reliability

[11] The states of the world should reflect adjustments to demand forecasts or elasticities arising through demand-side options for those options rather than the reasonable scenarios.

g. discount rate (the lower boundary should be the regulated cost of capital)

h. commissioning dates of *committed projects* and *anticipated projects*;

i. inclusion or exclusion of particular *anticipated projects* based on their degree of likelihood of being commissioned within the modelling period.

20. The number and choice of *reasonable scenarios* must be appropriate to the *credible options* under consideration. The choice of *reasonable scenarios* must reflect any variables or parameters that:

a. where the *identified need* is *reliability corrective action*, are likely to affect the ranking of the *credible options*;

b. for all other *identified needs*, are likely to affect the ranking of the *credible options*, or the sign of the *net economic benefits* of any of the *credible options*.[12]

21. *State of the world* means a reasonable and mutually consistent description of all the relevant demand and supply market characteristics and conditions that may affect the calculation of *market benefits* over the period of the assessment. This may include reasonable forecasts of:

a. electricity demand modified where appropriate to take into account demand-side options

b. the sum of efficient operating costs of supplying energy to meet forecast demand from existing, *committed*, *anticipated* and *modelled projects* including demand side and generation projects

c. the sum of avoidable costs of *committed, anticipated* and *modelled projects* including demand side and generation projects and whether all avoidable costs are completely or partially avoided or deferred

d. the capital and operating costs of other network augmentations consistent with the forecast demand and generation scenarios

~~e. the magnitude of a penalty (if any) for failing to meet an environmental target imposed on parties who produce, consume and transport electricity in the market, grossed up if not tax deductible to its value if it were deductible.~~

22. *Committed project* means a project where:

a. the proponent has obtained all required planning consents, construction approvals, ~~and~~ licenses, including completion and acceptance of any necessary environmental impact statement; and

b. construction has either commenced or a firm commencement date has been set; and

c. the proponent has purchased/settled/acquired land (or commenced legal proceedings to acquire land) for the purposes of construction; and

d. contracts for supply and/or construction of the major long lead-time components of the necessary plant and equipment ~~(such as poles, underground channels, wires, substations, transformers, as well as equipment for switching, monitoring and signalling)~~ have been finalised and executed, including any provisions for cancellation payments; and

[12] The sign of the *net economic benefit* refers to whether the credible option is likely to have a positive or negative *net economic benefit*.

e. the necessary financing arrangements, including any debt plans, have been finalised and contracts executed.

23. *Anticipated project* means a project which:

    a. does not meet all of the criteria in paragraph ~~23~~ 22; and

    b. is in the process of meeting at least three of the criteria in paragraph ~~23~~ 22.

24. *Modelled project* means a hypothetical project derived from market development modelling in the presence or absence (as applicable) of the relevant *credible option*.

Appendix 2: Minor comments on the application guidelines

Page	Excerpt / reference	Comments / suggestions
12	A RIT-D proponent has identified five credible options. For each credible option, the RIT-D proponent quantified the costs and market benefits. The RIT-D proponent then subtracted the present value costs from the present value market benefits to derive the net market ~~economic~~ benefits.	The passage cited should be edited as suggested.
15	Second main paragraph under the four dot points at the top of the page.	Insert the word "are" between the words "or" and "able" at the end of the second-last line of this paragraph.
17	"If a RIT-D proponent decides to proceed with the proposed distribution investment, it must prepare a DPAR within: • 12 months of the end of the consultation period on a non-network options report • where a non-network options report is not required, the publication of the RIT-D proponent's notice setting out its reasons for not preparing a non-network options report; or • a longer period agreed to by us in writing."	The drafting of this material should be revised to accurately reflect the provisions set out in clause 5.17.4(i) of the NER.
29 - 30	"A RIT-D proponent's reasons under cl. 5.17.4(d) of the NER notice (Notice) must include an reasons for non-network options: • could address the identified need and • are commercially feasible or • are technically feasible or • could be implemented in a sufficient time to meet the identified need and • satisfies all of the above requirements, when forming a significant part of a credible option and • It should also include the methodologies and assumptions used to determine the above points."	The drafting of this material should be reviewed and clarified.
30	See the last line on this page.	The second full stop at the end of the sentence should be deleted.
38	"RIT-D proponents obtain the market benefit of a credible option in a given reasonable scenario by with each option in place against the base case credible option or the 'do nothing' base case in place."	The drafting of this material should be reviewed and clarified.

Page	Excerpt / reference	Comments / suggestions
39	See Example 10.1.	In the first line of the paragraph immediately above the last 3 dot points at the bottom of page 39, the word "network" should be deleted and the words "demand-side" should be inserted.
41	See the first line of the past paragraph on this page.	Insert a full stop between the words "requirements" and "However".
41	See the last paragraph of section 12.	The cross reference to Example 9.2 appears to be incorrect.
46	"A RIT-D proponent may will model a separate market development path for each state of the world. For example, it would be appropriate to model how plant expansion paths change with different levels of demand with or without different credible options."	Delete the word "will" from this sentence.
56	See Example 18.	The value $400,000 in the last line of the example should be $480,000.
57 - 58	Section 2.14 of the Explanatory Statement says (on p 19): "We propose to define other parties as: all those, other than the RIT-D proponent, who produce, consume or transport electricity in the NEM that own plant and/or incur capital, operating and maintenance costs in the NEM." Page 36 of the draft guidelines refers to other parties in the manner set out above. Appendix A3 and Example 10 (on pages 57 and 58) of the draft guideline provide guidance in relation to other parties' costs, however they do not set out the definition cited above.	For completeness, it would be helpful if Appendix A3 also cited the definition of "other parties" set out on page 19 the Explanatory Statement.
58	"When considering changes in timing, the RIT-D proponent should only take into account distribution investments that are directed towards different identified needs to that of the credible option. It is not clear whether or how many investments this category could or would include."	The drafting of this material should be reviewed and clarified.
58, 59	See Examples 19 and 20.	The equations for the PV calculations need to be edited to show the numerator and denominator clearly, and to show the exponent values in super-script format.
59	"A RIT-D proponent could effectively treat the market benefits gained from increased load transfer capability and/or the ability of embedded generators to take up load as it would for changes in involuntary load shedding. A worked example on how to calculating this is under. Involuntary load shedding and customer interruptions."	The drafting of this material should be reviewed and clarified.

Page	Excerpt / reference	Comments / suggestions
60	A.7 Electrical energy losses	“Power factor correction” should be added to the list of actions that could be taken to reduce electricity losses.