Review of the cost benefit analysis guidelines and RIT application guidelines

Consultation Paper

April 2024

AUSTRALIAN ENERGY REGULATOR

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1 Introduction

This consultation paper initiates the AER's review of the Cost Benefit Analysis (CBA) Guidelines, the Regulatory Investment Test (RIT) application guidelines and RIT instruments (collectively referred to as the Guidelines). We plan to complete this review by December 2024.

The Australian Energy Market Operator (AEMO) uses a cost benefit analysis in developing the Integrated System Plan (ISP) in its national planning function for the National Electricity Market (NEM). The objective of the ISP is to identify the optimal development of the national electricity market to facilitate the coordination of network, generation and storage investment to meet projected demand. Network businesses and AEMO (for Victoria), as jurisdictional planners, must also conduct a cost benefit test to identify the most efficient way to deliver specific projects before building electricity network infrastructure.

AEMO and network businesses, in carrying out their respective functions, follow guidance we prepare on matters including analysis and consultation. We are also responsible for compliance and enforcement in respect of the legally binding elements of the Guidelines.

The energy transition and recent changes in community awareness and support for network infrastructure projects have resulted in a need to update network regulation processes, including these Guidelines. This is related to a large amount of work that is being conducted by jurisdictions, market bodies and market entities to facilitate the timely investment in the NEM to support the energy transition.

1.1 Scope of this review

This review will consider changes to the Guidelines that are:

- relevant to valuing emissions reduction in the Integrated System Plan (ISP) and RIT as a class of market benefit[1]
- required by recent or planned changes to the National Electricity Rules (NER), including:
  - enhanced community engagement by RIT-T proponents
  - treatment of concessional finance benefits[2] including guidance on the information we require to be satisfied that concessional finance benefits are flowing through to consumers as intended
  - guidance on the treatment of costs for early works that are undertaken concurrently with a RIT-T for an actionable ISP project[3]

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1 AEMC, *National Electricity Amendment (Harmonising the national energy rules with the updated national energy objectives) Rule 2024 No. 1*, 1 February 2024.

2 AEMC, *National Electricity Amendment (Sharing concessional finance benefits with consumers) Rule 2024 No. 7*, 21 March 2024.

3 AEMC, Bringing forward early works to improve transmission planning rule proposal, December 2023. The AEMC received a rule change request on 6 December 2023, and we expect the final rule to be published before the end of our guidelines review.

  - guidance on the timing and basis for ISP feedback loop assessments by AEMO in relation to final RIT-Ts for actionable ISP projects[4]

- changes or matters raised in the AER's Directions Paper on Social Licence for Electricity Transmission Projects,[5] clarifying how social licence issues can be considered in the regulatory investment test for transmission (RIT-T). This includes:
  - how this may affect the identification of credible options
  - how this relates to the classes of costs and benefits and the feasibility of options, and
  - through effective community engagement by RIT-T proponents.[6]

The Guideline Review only considers the effect of those requirements and matters identified above on the ISP and RITs, with any other effects being outside the scope of the review. The purpose of the Guidelines is to establish additional requirements, and provide further guidance, for AEMO and RIT proponents (network businesses) in relation to the application of this cost benefit analysis within the framework set out in the NER.

In this consultation paper, we discuss preliminary approaches and seek stakeholder views on matters within the scope of the Guideline Review.

1.2 Invitation for submissions

The subjects covered by the review are each individually important, and we invite stakeholders to engage with the subjects individually (if desired) as well as providing feedback on questions identified for consultation.

Submissions will be accepted until **5 June 2024**. The AER will also run three public forums in May 2024, with registration via the AER website, on:

- estimating greenhouse gas emissions reduction,
- building community support for transmission projects, and
- concessional finance, ISP feedback loop timing and treatment of costs for early works for transmission projects.

We prefer stakeholders send submissions electronically to: RITguidelines@aer.gov.au

4 AEMC, *National Electricity Amendment (Improving the workability of the feedback loop) Rule 2024 No. 4*, 7 March 2024.

5 AER, Directions paper - Social licence for electricity transmission projects, October 2023.

6 Guidance on community engagement is only relevant to the RIT-T for actionable ISP projects housed in the CBA Guidelines.

Alternatively, stakeholders can mail submissions to:

Ms Stephanie Jolly
Executive General Manager
Australian Energy Regulator
PO Box 12241
George Street Post Shop
BRISBANE QLD 4003

We prefer all submissions be publicly available to facilitate an informed and transparent consultation process. We will therefore treat submissions as public documents unless otherwise requested.

We request parties wishing to submit confidential information to:

- clearly identify the information that is subject of the confidentiality claim, and reasons for the confidentiality claim
- provide a non-confidential version of the submission, in addition to a confidential one.

We will place all non-confidential submissions on our website at www.aer.gov.au. For further information regarding our use and disclosure of information provided to us, see the ACCC/AER Information Policy, June 2014 available on our website.

Please direct enquiries about this paper to RITguidelines@aer.gov.au

We look forward to engaging with all stakeholders on these important updates to our Guidelines to support the energy transition and prepare the future of network regulation.

1.3 Consultation Process

The standard rules consultation procedures[7] (applicable for the purposes of this review) set out a three-stage process to amend the Guidelines:[8]

- Stage 1: Publish a consultation paper that:
  - explains particulars of the proposal, the issues involved and options to address them, if applicable
  - identifies the provision of the NER under which the consulting party is making the proposal; and
  - invites stakeholders to make written submissions; and the due date for written submissions. The AER has set the due date for submission 30 business days after the publication of the consultation paper. While the rules consultation procedures require no less than 20 business days, this time has been extended to account for the complexity of issues covered and anticipated stakeholder interest.

7 Standard rules consultation procedure is set out in NER, r. 8.9.2.

8 The standard rules consultation procedure, with a consultation period of 30 business days at the draft stage, also satisfy the transmission and distribution consultation procedures set out in NER, rr. 6A.20(d) and 6.16(d) respectively, should it become necessary.

- Stage 2: Publish draft decision or amended guidelines no later than 50 business days after the due date for submissions on the consultation paper, with an invitation for written submissions, allowing no less than 20 business days for stakeholder submissions.
- Stage 3: Publish final decision or amended guidelines no later than 50 business days after the due date for submissions on the draft decision.

All consultation procedures allow the AER, under specific circumstances, to extend the time on the final decision. Further details on these procedures are set out in the NER.[9]

We are running a single consultation process for all the Guidelines to provide consistency between the Guidelines and reduce stakeholder burden in making separate submissions.

1.4 Consultation timeline and next steps

This consultation paper is the first step of our consultation process. Table 1.1 summarises the key deliverables and proposed dates for this consultation process.

Table 1.1 Indicative timeline for guideline review

Project step	Expected date
Consultation Paper published	24 April 2024
Virtual Public Forums (Consultation Paper)	May 2024
Submissions close	5 June 2024
Draft Guidelines published	13 August 2024
Virtual Public Forums (Draft Guidelines)	August 2024
Submissions close	September 2024
Final Guidelines published	November 2024

9 NER, r. 8.9.2 for Rules Consultation Procedures; NER, Part H of Chapter 6A for Transmission consultation procedures and NER, Part G of Chapter 6 for distribution consultation procedures.

1.5 Virtual Public Forums

We will hold three public forums on our consultation paper. Each forum will discuss a different section of the consultation paper as set out in Table 1.2.

Table 1.2 Public forums on the consultation paper

Consultation paper section	Forum date
Valuing emissions reduction	14 May 2024
Social licence: • Identifying credible options in a RIT-T assessment • Costs and market benefits in ISP and RIT-T assessments • Community engagement	May 2024
The three remaining rule changes: • sharing concessional finance benefits with consumers • Improving the workability of the feedback loop • Early works contingent project application before completion of a RIT-T	16 May 2024

Registration details for the Virtual Public Forums can be found on the AER website.

2 AER's role

The AER is responsible for the economic regulation of electricity transmission and distribution services in the NEM, which promotes efficient investment in, and efficient operation and use of, these services for the long-term interests of consumers. We are also responsible for monitoring, investigating and enforcing compliance with obligations under the NEL, NER and other respective regulations.

Our role in the transmission and distribution planning framework includes:

- establishing and maintaining the RIT-T and the RIT-D
- providing more detailed guidance to AEMO, RIT-T and RIT-D proponents, and other stakeholders about the development of the ISP and the application of the RIT-T and RIT-D, through developing relevant guidelines (including binding requirements set out in those guidelines).[10]
- monitoring compliance with the NER, including in relation to the ISP, and taking compliance action where necessary and appropriate
- identifying best practice cost benefit analysis to promote investment efficiency, consistent with our role in the current RIT processes
- making determinations to settle ISP and RIT disputes
- assessing efficient proposed expenditure associated with transmission and distribution projects within the contingent project application framework.

2.1 CBA guidelines

CBA is an integral part of transmission network planning and investment. The CBA guidelines are to be used by:

- AEMO in preparing an ISP. In doing this, AEMO identifies an optimal development path that promotes the efficient development of the power system, based on a quantitative assessment of the costs and benefits of various options across a range of scenarios.
- RIT-T proponents in applying the RIT-T to actionable ISP projects. Actionable ISP projects are identified in an ISP, and trigger RIT-T applications for these projects. Under the RIT-T instrument, RIT-T proponents must identify the credible option that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the market (the preferred option). By doing this, the RIT–T instrument realises the purpose of the RIT-T under NER clause 5.15A.1(c), which is to identify the preferred option.

[10] Guidance on the RIT-T for actionable ISP projects is housed in the Costs Benefit Analysis Guidelines and refers to RIT-Ts that are required to be undertaken as directed by AEMO's most recent ISP. The RIT-T application guidelines apply to projects that are identified outside the ISP.

Our CBA guidelines should be read in conjunction with the forecasting best practice guidelines and the relevant clauses of the NER. RIT proponents should read the CBA guidelines in conjunction with the relevant RIT instrument and the relevant clauses of the NER.

2.2 RITs for transmission and distribution projects

In accordance with the NER, we are responsible for establishing and maintaining the RITs, and for establishing and maintaining more detailed guidelines on the application of the RITs. The RIT instruments for transmission and distribution establish the cost-benefit test. The RIT application guidelines provide more detailed guidance on:[11]

- the purpose of RITs and on identifying which projects are subject to assessment.
- the cost benefit assessment required to be undertaken in the RIT, including guidance on the selection of reasonable scenarios, selection of credible options and the preferred option, and treatment of uncertainty risks and externalities.
- 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.
- 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 losses.
- the dispute resolution process. This includes guidance on the requirements and procedure for making a RIT dispute, along with how we will make a determination on any dispute.

[11] AER, RIT–T application guidelines, October 2023; AER, RIT–D application guidelines, August 2022.

3 Proposed amendments to the CBA and RIT application guidelines

The AER anticipates that our preliminary positions will result in amendments to:

- the CBA Guidelines applying to the ISP and to the RIT-T process for actionable ISP projects[12]
- the application guidelines for the RIT-T (i.e., non-actionable ISP projects)[13] and the regulatory investment test for distribution (RIT-D)[14]
- the RIT-T and RIT-D instruments.

3.1 Including an emissions reduction benefit in the ISP and RIT

3.1.1 The issue

The NER requires system planning and investment decisions to be made using a cost-benefit test to ensure that investments serve the National Electricity Objective (NEO).

Energy Ministers reformed the National Energy Laws to introduce an emissions reduction element into the national energy objectives. These changes took effect in late 2023.[15]

The NEO now requires AEMO and RIT proponents (RIT-T and RIT-D) to consider greenhouse gas emissions reductions in the ISP and RIT, respectively. In the NER, the description of "net economic benefit" has been updated[16] so that in addition to benefits to participants in the NEM, it also includes emissions reduction benefits whether or not those benefits are to NEM participants.

On 28 February 2024, Australia's Energy Ministers, collectively known as the MCE, agreed to a method to derive the interim value of greenhouse gas emissions reduction (VER) to be used in considering or applying the national energy objectives.

12 NER, r. 5.22.5(a).

13 NER, r. 5.16.2(e).

14 NER, r. 5.17.2(e).

15 Energy and Climate Change Ministerial Council, Energy Ministers Sub-Group meeting communique, May 2023.

16 AEMC, *National Electricity Amendment (Harmonising the national energy rules with the updated national energy objectives) Rule 2024 No. 1*, 1 February 2024.

We recently issued AER draft guidance on valuing emissions reduction, as contemplated in the amendments to the national electricity laws. The final version of this guidance will bind the AER and RIT proponents to the method of calculating the VER.[17]

We are consulting on how the VER will be used to include emissions reduction as a class of market benefit in the cost benefit analysis for the ISP, and in the cost benefit test for transmission and distribution investments. We will consider submissions received in response to the AER's draft guidance on valuing emissions reduction, insofar as they relate to this review.

3.1.2 Preliminary view and proposed approach to Guidelines

AEMO and RIT proponents must calculate the benefits of emissions reduction as part of assessing the investment option that maximises the net economic benefits to meet the identified need. This excludes investment tests for which emissions reduction benefits are not material and the estimated cost of undertaking analysis to quantify these benefits are likely to be disproportionate to the scale, size and potential benefits of each credible option. To calculate the market benefit from emissions reduction, modelling must be carried out to estimate emissions.

Market modelling tests electricity system costs where an investment option is in place compared with a scenario without the investment option (base case). The difference in market benefits between the investment option and the base case reflects the gross market benefits of the investment option. The gross market benefits would typically include benefits such as reductions in generator capital costs, avoided generator fuel costs, avoided alternate project investment and avoided involuntary load curtailments.

Calculating an emissions reduction benefit in the cost benefit test

We propose that an emissions reduction class of market benefit would be estimated as the benefit that an investment provides from reducing emissions relative to the base case. The base case for the ISP is the counterfactual development path, defined as the case where none of the ISP projects are built. The base case for a RIT is the case where none of the credible options is built.

To calculate this benefit, the annual values of emissions reduction would be multiplied by the quantity of emissions reduction in each year in the cost-benefit test. That is, the emissions reduction benefit in year *t* would be given by,

$$Emissions\ benefit_t = VER_t \times (Base\ case\ emissions_t - Investment\ case\ emissions_t).$$

In which, for each year *t*:

[17] The guidance that we have issued so far on the application of the amended objective does not mean we have finalised our position for the purposes of the CBA and the RIT application guideline updates. Should the method for estimating emissions reduction benefits in the already issued guidance be inconsistent with the updated CBA, RIT-T and RIT-D application guidelines, we will update that guidance to maintain consistency.

- total emissions in a state of the world is the sum of emissions produced by all generators in that state of the world; and
- the emissions of each individual generator within a state of the world can be calculated as the product of the generator's total generation multiplied by its emissions intensity factor.

Annual emissions reduction benefits would then be discounted and included in the calculation of net market benefit for each investment option (for a RIT) or each candidate development path (for the ISP).

This emissions reduction benefit calculated in this manner values all emissions reductions in the investment case over the base case. This includes emissions reductions resulting from the combination of all factors in the modelling, including the effect of all established policies.

We propose that a similar method for calculating the emissions reduction benefit will apply to RIT-T proponents for both actionable and non-actionable projects, to RIT-D proponents and to AEMO in developing the ISP. This provides consistency between the ISP and the RITs. Additionally, it is consistent with the requirement for RIT-T proponents for actionable ISP projects to adopt the market modelling for the ISP, as well as requirements for modelling in the RIT-T and RIT-D.

Emissions in market modelling

The current market modelling methodology and scenario definition includes carbon budgets which are used within the ISP modelling at both a state level and a NEM wide level. These budgets are guided by current policies[18] and, for the NEM-wide carbon budget, multi-sectoral modelling undertaken by CSIRO. The NEM-wide carbon budgets are used as a proxy for different paces of decarbonisation,[19] and are a main source of differentiation between possible future scenarios.

In the ISP methodology, carbon budgets are set for periods between key milestone years as the cumulative emissions of a linear trajectory between the two milestones. The carbon budgets effectively constrain the development and utilisation of fossil-fuel generation, by simulating an additional cost for generators based on their emissions.

We consider it reasonable to explore whether NEM-wide carbon budgets remain the most appropriate approach to underpin emissions assessment in the ISP. Examining this at this point is important given the establishment of emissions reduction as a class of benefits under the Rules and the publication of the VER, both of which are intended to promote effective consideration of options for investment to support the energy transition.

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[18] According to NER 5.22.3, when determining how the ISP would contribute to achieving the NEO, AEMO must consider the emissions reduction targets stated in the targets statement (published by AEMC). AEMO may also consider a current emissions reduction target which is not set out in the target statement. This includes jurisdictional policies which are sufficiently developed to enable AEMO to identify the power system impacts and where certain criteria are met (as specified under 5.22.3(b)(2).

[19] It is assumed that policy measures would be taken in the future to ensure jurisdictional targets are met and to enable the paces of decarbonisation required by the scenarios.

We note that the current ISP methodology effectively results in a different value of emissions in each development path and each scenario, changing over time and independent of the VER. Under this methodology, emissions may sometimes be indirectly assigned a value that is different to the VER during market modelling, with the purpose of bringing the modelling output emissions trajectory back within the carbon budget. However, the VER would be used to calculate an emissions reduction benefit for the purpose of the cost benefit test that is based on all modelling parameters, including the carbon budgets.

The use of NEM-wide carbon budgets is based on inputs that remain valid for each ISP scenario. It is a way of modelling the electricity sector while limiting global temperature rise as defined in the scenario. Our preliminary view is that without this the scenarios would be less useful in trying to map the possible different future states of the world. As such, the use of carbon budgets does not conflict with the inclusion of an emissions reduction benefit in the cost benefit analysis, but rather enriches the analysis. However, we welcome stakeholder views on this point.

Where a development path has lower total emissions than the counterfactual development path (or has a later timing of emissions) the difference will result in an emissions reduction benefit which would be valued at the VER. These differences in emissions would result from the consideration of all modelling parameters.

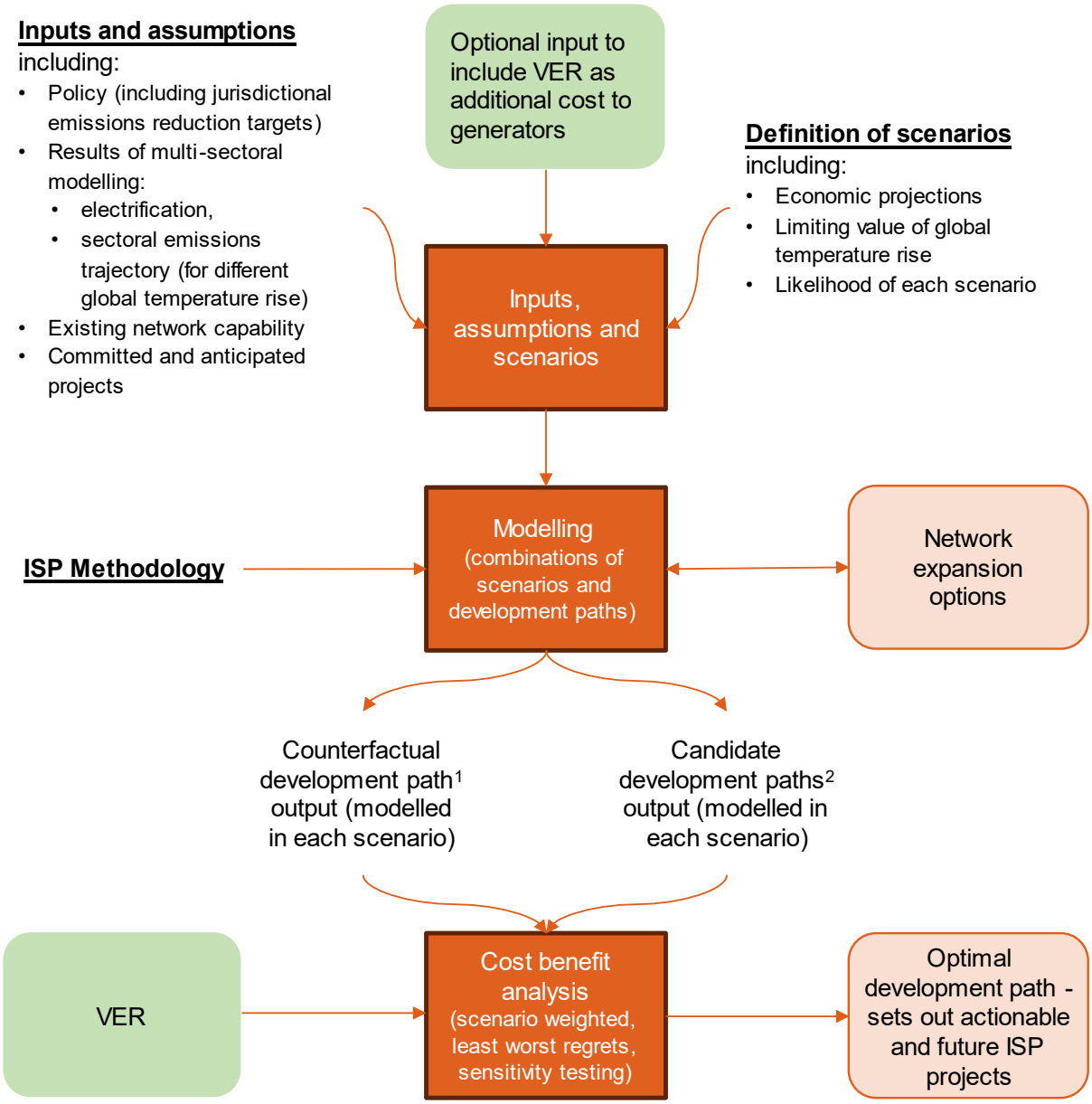
It would also be possible to include the VER in the market modelling as a cost per MWh on fossil fuel generators to influence generator dispatch and investment. This is consistent with the treatment of other costs of generation within the modelling (e.g., generator fuel costs), and would operate in a similar manner to the carbon budgets.

Despite this, the inclusion of the VER as an input to market modelling may not be reflective of reality since a VER is not a real cost faced by fossil-fuel generators. The VER may influence the merit order within the model that may not reflect the merit order that would eventuate.

Our preliminary view is that the VER should not be included as an input cost to generators in market modelling. However, we are interested in stakeholder views on this option.

The proposed approach is illustrated in Figure 3.1 (where the introduced components of the modelling and cost-benefit analysis are italicised). If the VER is not used in the modelling as a cost of generation, it is only included in the last step in Figure 3.1. Appendix B provides illustrative examples of both approaches in the context of the ISP and the RIT.

Figure 3.1 Steps in estimating emissions reduction benefits



Note 1: The counterfactual development path models only existing committed or anticipated network investments
Note 2: A candidate development path models a set of network investments. Timing of investments may vary across the scenarios.

Additional factors in modelling emissions

There are several other issues that need to be considered when calculating emissions in different scenarios, including:

- the source of emissions factors to be used for each generator
- the scope of those emissions factors (for example, should the fugitive emissions associated with the production of black coal be included in the emissions factor for burning coal in the power station)

- whether the emissions embodied in the production of infrastructure (such as steel and cement) should also be included in the calculations
- emissions reductions in other sectors as a direct result of the network investment decisions
- the approach to discounting emissions reduction benefits when calculating net present values.

The AER would prefer an approach that promotes consistency and the use of common, publicly available data sources wherever possible. Data published by the Clean Energy Regulator is an obvious starting point for generator emissions intensity assumptions. However, there is no comparable official dataset to use for embodied emissions.

Questions

How should emissions reduction benefits be included in the RIT and cost benefit analysis guidelines?

Do you have any views on the option to include the VER in the inputs to market modelling as a cost ($/MWh) on fossil-fuel generators in terms of both its application and the potential outcomes from its application?

Do you have any views on the implications of the current carbon budget methodology remaining in place at the ISP input stage while the VER contributes to the assessment of the relative net benefit of different development pathways and investment options?

Are there alternative approaches to estimating an emissions reduction benefit, and if so, what are the advantages and disadvantages of alternative approaches that should be considered?

Which additional material factors should be considered in modelling emissions? How should data to support these factors be sourced? Should the AER consider including specific guidance on any of the factors?

3.2 Social Licence

3.2.1 The issue

AEMO has highlighted the significant amount of new energy infrastructure that needs to be built in the next decade to connect and deliver new renewable capacity. This infrastructure includes almost 5,000 kilometres of electricity transmission lines[20] and over 20 GW of generation and storage developments.[21] To successfully make this transition, the energy sector needs to build and maintain social licence to develop this infrastructure. Social licence refers to level of an organisation's acceptance and its activities by a community.

We propose to update the RIT-T for actionable ISP projects housed in the CBA guidelines and the RIT application guidelines for non-actionable ISP projects to provide guidance on social licence related issues.

This consultation paper seeks stakeholder views to inform our positions on:

- how transmission businesses might ensure that a credible option can be implemented in sufficient time to meet the identified need as required by the definition of credible option
- the costs associated with addressing social licence that can be included in the RIT-T, including worked examples
- the expectations on transmission businesses regarding engagement with local communities and other stakeholders affected by major transmission projects as part of preparatory activities and during the RIT-T.

In October 2023, the AER published its 'social licence for electricity transmission directions paper' that sets out how we consider social licence for transmission projects could best be addressed in the current transmission planning framework.

The key themes raised in stakeholder responses and which we can address through this guideline review included:

- the need for genuine, timely and transparent engagement processes, plans and reporting
- tailored engagement for the involved parties, feeding back into planning in a meaningful way
- inclusion of social feasibility and benefit sharing in the processes for selecting credible options and analysis of costs.

Stakeholders raised other issues which we are unable to address through this Guideline review. These issues would require changes to the NER or government policy before we could consider these issues for the purposes of a guideline review.

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20 AEMO, Draft 2024 Integrated System Plan section 5.1, December 2023.

21 AEMO, 2023 Electricity Statement of opportunities, 2023-24 Outlook, December 2023.

In February 2024, the Australian Government released the Community Engagement Review led by the Australian Energy Infrastructure Commissioner. The review made recommendations to improve engagement with renewable energy infrastructure developments.

We have considered the findings and recommendations of the Community Engagement Review but have not identified specific issues that would require changes to these Guidelines. We will review the Energy Minister's response due in July 2024.

3.2.2 Preliminary view and proposed approach to Guidelines

Identifying credible options in a RIT-T assessment

In completing a RIT-T, a transmission business must consider credible options. A credible option is defined as an option (or group of options) that:[22]

1. addresses the identified need;
2. is (or are) commercially[23] and technically[24] feasible; and
3. can be implemented in sufficient time to meet the identified need.

We expect that in its consideration of credible options, a RIT-T proponent will establish how social licence issues have been considered to meet each of these criteria.

Community engagement will help proponents determine whether an option may be considered a credible option. It assists proponents in deciding whether an option is technically feasible or if it can be delivered in sufficient time to meet the identified need. This includes the case where the identified need is to meet a reliability corrective standard.

In considering the need to build and maintain social licence, we considered in our directions paper that the identification of a credible option may be affected as follows:

- **Project not going ahead** – Community opposition to a transmission project may lead to the project not going ahead. This could be due to land access issues and/or if the project does not obtain jurisdictional planning approvals. In this case, given the possibility of project cancellation, an argument could be made that the project delivery option impacted by these issues is neither commercially nor technically feasible and would not meet the identified need. Therefore, it is not a credible option for the purposes of the ISP and the RIT-T.
- **Project delay** – Community opposition may lead to the project being delayed, and in some cases, this may also mean that an option can no longer be implemented in sufficient time to meet the identified need.

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22 NER, r. 5.15.2(a).

23 An option is considered *commercially feasible* if a reasonable and objective operator, acting rationally in accordance with the requirements of the RIT–T, would be prepared to develop or provide the option in isolation of any substitute options.

24 An option is considered *technically feasible* if there is a high likelihood that it will, if developed, provide the services that the RIT–T proponent has claimed it could provide for the purposes of the RIT–T assessment.

- **Cost and benefit estimation** − Community opposition may lead to the project being delayed. This may mean that market benefits will be realised later and might therefore be lower than they would otherwise be. The costs of the project may also increase because of a delay. The RIT-T proponent may need to incur material expenditure to address local community concerns to proceed with a development. Such material expenditure may include building the line along a longer route or making other significant project changes like changing the location of substations.

Questions

What factors or criteria should a RIT-T proponent consider when determining whether a project:

- is going to be delayed, or is not likely to proceed such that the project is no longer technically feasible?
- is not likely to be delivered in sufficient time to meet the need?

What might be some objective measures of any factors identified above?

If initial community engagement indicates that an option may not be credible, what further engagement or other action should a transmission business undertake to determine if an option may later become credible?

Costs and market benefits in ISP and RIT-T assessments

Our directions paper, informed by the AEMC's TPI Review Stage 2 report, recommended that the AER provide additional guidance to stakeholders on how the costs associated with building and maintaining social licence for major transmission projects should be considered and assessed as part of the RIT-T.[25]

The RIT-T is based on analysis of the estimated costs and benefits of future supply and demand if each credible option were implemented compared to the base case where no credible option is implemented. This analysis leads to the selection of a preferred option that maximises the net economic benefit (estimated market benefits less estimated costs) to all stakeholders. The preferred option accounts for, and provides the maximum net benefit to, those who produce, consume and transport electricity in the NEM compared to all other credible options.

The RIT-T instrument and CBA guidelines are prescriptive about the classes of costs and market benefits that can be included in that analysis, although additional classes can be agreed with the AER in advance. The costs relate to the cost of constructing or providing, operating and maintaining a credible option and in complying with their regulatory

[25] AEMC, Transmission Planning and investment Review – Stage 2 final report, section 3.2, October 2022.

obligations. The market benefits of an identified credible option include the classes of benefits identified in the ISP and the NER.[26]

Social licence issues can be considered where applicable to the classes of market benefits and the costs in the ISP or the RIT-T. These issues may affect the valuation of benefits and costs in different ways, including:

- Costs
  - the costs incurred in constructing or providing a credible option:
    - changed estimates for negotiated compensation of landholders (this excludes mandated additional payments from government schemes to affected landholders which are treated as operating costs)
    - an allowance for route deviations, related to the route length through private land
    - increased costs for design changes due to community consultation. e.g., to tower design (if the modified design would not be a separate credible option and therefore an increased cost to the existing preferred option),
    - increased cost related to the route length and unit quantities (e.g., towers, relocation of substations) for which the design change identified in consultation applies.
    - added costs for local infrastructure, where it is needed for construction but may be made larger and/or more permanent (e.g., constructing a permanent access road instead of a temporary access road at request of the local community).
    - other capital costs that would enable the project to proceed, or to proceed more quickly, due to increased community acceptance of the project.
  - operating and maintenance costs in respect of the operating life of a credible option:
    - Additional payments to landholders/neighbours, related to route length through private land
    - Environmental programs, related to technology, design and route (although many environmental impacts will be unknown at this stage, allowances may be made)
  - the cost of complying with laws, regulations and applicable administrative requirements in relation to the construction and operation of a credible option:
    - The cost of stakeholder engagement, related to the number of communities, categories of stakeholders, number of stakeholders, duration of project.
- Market benefits
  - Market benefits are limited to benefits to those who produce, consume or transport energy in the NEM. This is provided for under the NER[27], and cannot be overridden

[26] RIT-T proponent required to quantify the following market benefits: NER, r. 5.15A.2 (4), and cost: NER, r. 5.15A.2 (8).

[27] NER, 10. “Net economic benefit”, as referred to by NER 5.15A.1(c)

in Guidelines. Other benefits that are external to the market (except for the benefits of greenhouse gas emissions reduction) are not included in the RIT-T (e.g., improved amenity to a community from rerouting a transmission line).

- Some of the market benefits are linked to the timing of the project and may change if the project is delayed to build social licence or as a possible result of not building sufficient social licence for a project. Where the potential length of the delay and the sensitivity of the value of benefits to that delay differ between credible options, this may affect the cost benefit analysis and the selection of the preferred option.

The ISP and RIT-T may also include any other classes of cost or market benefits proposed by AEMO or RIT-T proponents with the prior agreement of the AER. In considering whether other classes of costs and market benefits should be included in the cost benefit analysis, we must determine that it is material to the choice of the preferred option.

Questions

Is there a need to clarify costs and benefits that may be included in the RIT-T to address social licence issues? What worked examples would be useful?

Are any additional classes of costs and market benefits necessary to address social licence issues, and available within the framework provided by the Rules?

How could the effect of delays on the costs and market benefits of each credible options be assessed and justified?

If a RIT-T were to include forecast expenditure on social licence activities to address an identified reduction in market benefit due to project delay, what justification would be required to demonstrate this expenditure will reduce the potential project delay?

Community engagement

Investments which change the way transmission businesses operate or expand the footprint of infrastructure will impact the communities in which they are proposed, potentially in positive and negative ways. Successful investment in this infrastructure requires a serious effort from the sector, particularly transmission businesses, to closely engage with, and respond to, the needs of stakeholders including local communities, First Nations people and landholders.

Effective engagement is engagement that facilitates collaboration and a dialogue between landholders, communities, the broader consumer base, and transmission networks to ensure timely project delivery. Effective engagement is necessary to build the social licence for a transmission project to proceed. It promotes collaboration and provides evidence to support proposed expenditure on network investment in regulatory proposals.

Effective early engagement can:

- highlight what may or may not be a credible option for a transmission project.
- help understand what factors a community may be willing to accept and their most substantial concerns – including what actions by the transmission business are most likely to build social licence for the project.

- allow for the identification of cost-efficient solutions to resolve concerns which could otherwise prevent the timely development of infrastructure necessary to meet future energy needs.

Our expectations are that transmission businesses:

- will meet and explain how they have met rule requirements and relevant jurisdictional policies and guidelines.
- will undertake best practice engagement, in accordance with broadly accepted guidance in the sector.
- will develop a clear framework for how they approach their social licence engagement and remain flexible and responsive to stakeholder feedback.

Enhancing community engagement in transmission building

The AEMC, in its rule change Enhancing community engagement in transmission building,[28] determined that at the preparatory works stage, RIT-T proponents must undertake engagement with stakeholders that are reasonably likely to be affected by the development of the project. This applies only to actionable ISP projects, future ISP projects, or projects within a REZ stage.

For a RIT-T the definition of interested parties that applies to actionable ISP projects has also been updated to include stakeholders that are reasonably likely to be affected by the development of the project. These stakeholders contain local landowners, local council, local community members, local environmental groups and traditional owners.

The AEMC also determined that for preparatory works and for RIT-Ts for actionable ISP projects, engagement must be undertaken in accordance with a set of community engagement expectations. These expectations set a consistent minimum standard of practice for opportunities available to stakeholders in the consultation process, as well as the materials that stakeholders will receive throughout the engagement process. A key part of these community engagement expectations is using reasonable endeavours to address all categories of stakeholders in a tailored and effective manner.[29]

We note that the definition of interested parties has been expanded for actionable ISP projects to include stakeholders that are reasonably likely to be impacted by the development of the project. However, the previous definition still applies to a RIT-T for a project that is not an actionable ISP project or to a RIT-D. This means the guideline update to reflect this updated definition will only apply to the Cost Benefit Analysis guidelines for actionable ISP projects.

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[28] AEMC, National Electricity Amendment (Enhancing Community Engagement in Transmission Building) Rule, 9 November 2023 (https://www.aemc.gov.au/rule-changes/enhancing-community-engagement-transmission-building).

[29] The community engagement expectations are listed in NER, r. 5.10.2.

Questions

There are several areas of the Guidelines for which clarification may be provided following the updated definition of 'interested party'. We are seeking stakeholder feedback around the provision of these clarifications.

We are also seeking views on whether the Guidelines should be prescriptive about these matters or should set out principles within which RIT-T proponents should operate.

The definition of stakeholders that are "reasonably expected to be affected by the development" of the project:

- What criteria should be used to establish when a stakeholder is 'reasonably expected' to be affected? Are there conditions to consider other than the presence of a stakeholder group in the geographical area of a project?
- What threshold should be considered when assessing whether a stakeholder is 'reasonably expected' to be affected? To what extent are RIT-T proponents able to assess the materiality of effects on stakeholders before engaging with them?

How should interested parties be identified?

- Should reasonably affected stakeholders be identified nominally, by constitution of a list in advance?
- Should RIT-T proponents identify specific affected stakeholders, or rather ensure that the consultation addresses each category of stakeholder?
- Is it necessary or sufficient to have representation of each category of stakeholders?

Planning stakeholder engagement

The community engagement expectations require that RIT-T proponents use reasonable endeavours to ensure that engagement materials, methods of communication and participatory processes are tailored to meet the needs of different stakeholders. There is also an expectation that stakeholders will be provided with a range of opportunities to be regularly involved throughout the project.[30] This means that specific engagement materials are expected to be produced and disseminated for each stage of engagement, including during preparatory works.

We consider that it will be necessary for the proponent to develop a detailed stakeholder engagement plan before undertaking engagement during the RIT-T process. This is mainly due to the diverse needs of the different stakeholders, and the requirement to provide sufficient opportunity to consider and respond to engagement materials. These stakeholders, amongst others, may include local landowners, local council, local community members, local environmental groups and traditional owners.

[30] NER, r. 5.10.2.

The stakeholder engagement plan should as a minimum address how the RIT-T proponent for actionable ISP projects plans to:

- identify stakeholders for the purposes of engagement
- the objectives of engagement during preparatory works; and
- for the RIT, how the engagement will meet each of the community engagement expectations, how the engagement compares to best practices, and a timeline of different engagement activities during the process.

The plan should also provide reasoning that the costs of engagement identified in the plan are prudent and efficient.

We expect that the RIT-T proponents for actionable ISP projects would report on engagement against the stakeholder engagement plan at the time of preparing both the draft and final reports.

Questions

While community engagement expectations require that "reasonable endeavours" should be used, how should this be interpreted and what would be the minimum expectations for tailoring engagement materials and communication methods to meet the needs of different stakeholders?

The community engagement expectations include that "stakeholders (will be) provided with a range of opportunities to be regularly involved throughout the actionable ISP projects, future ISP projects and REZ stages".[31] Should there be guidance on what opportunities for regular involvement the RIT-T proponent could consider providing stakeholders with?

What requirement should the guidelines contain for a RIT-T proponent to publish an engagement plan on how it will make reasonable endeavours to satisfy community engagement expectations?

The CBA guidelines state that proponents must consider undertaking early engagement only to the extent that doing so complements rather than duplicates or hinders AEMO's engagement work in developing the ISP.[32] Following the rule change, proponents now have an obligation to undertake early engagement, even where that engagement might be duplicative.

Further, we note that the expectations for stakeholder engagement by AEMO in developing the ISP have not changed, given the expectations that apply during preparatory works. In developing the ISP, AEMO may consider using methods of communication and publishing engagement materials that are tailored to each of the categories of stakeholders.

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31 NER, r. 5.10.2.

32 AER, CBA Guidelines: Guidelines to make the Integrated System Plan Actionable section 4.5.1, October 2023.

Questions

How can we promote continuity and avoid duplication between AEMO's engagement work, and the engagement undertaken by the RIT-T proponents?

Engagement on draft and final reports

As part of the RIT-T, a proponent must prepare a Project Assessment Draft Report (PADR) followed by a Project Assessment Conclusions Report (PACR).[33]

The AEMC's final rule provides RIT-T proponents for actionable ISP projects with flexibility to determine, in the period leading up to the PACR:

- when to engage with each stakeholder group
- at what level of granularity should each discussion be undertaken
- how the community engagement expectations will be implemented.

The proponents must report on stakeholder feedback. Where the current guidelines require the publication of submissions and a summary of the submissions, the NER now require the proponents to inform stakeholders about how stakeholder feedback has been considered in decision-making.

Questions

For the draft and final reports, is the normal means of consultation (by publication on proponent and/or AEMO website) sufficient to be in accordance with the expectations?

What should we require proponents to include about stakeholder feedback in the draft and final reports?

[33] NER, r. 5.16A.4.

3.3 Sharing concessional finance benefits with consumers

In March 2024, the AEMC published a rule change determination to facilitate the sharing of concessional finance benefits between network service providers and consumers.[34] The rule includes transitional provisions that recognise any consultation undertaken by the AER for the purposes of updating the Guidelines in anticipation of the final rule.

3.3.1 The issue

The current regulatory framework does not directly facilitate sharing of the benefits of concessional financing with consumers. However, in some cases, the financier may want some of the benefits of their concessional financing to flow directly to consumers through lower current or future network charges under the regulatory framework.[35] The concessional finance rule determination provides rule definitions for concessional finance and concessional finance agreement and facilitates the direct sharing of the benefits of concessional financing with consumers under the rules.

Since concessional finance may reduce the cost to consumers of certain projects, it may be appropriate to reflect this lower cost in the cost-benefit assessment in RIT-Ts and RIT-Ds. Although the existing RIT-T and RIT-D guidelines provide guidance on external funding contributions and considers the treatment of government grants, this guidance doesn't clearly cover concessional financing arrangements.

3.3.2 Preliminary view and proposed approach to guidance

In the rule change, the AEMC recommended that the AER provide guidance on:

- the level of funding certainty required before concessional financing can be used to support a project option in the economic assessment process.
- the treatment of concessional finance in the economic assessment process and to provide a more consistent approach across the Guidelines.
- requires the AER to extend the guidance and worked examples in its CBA guidelines and RIT application guidelines to include external funding contributions.

The AER's preliminary view is that concessional finance agreements, or other external funding contributions intended to reduce the cost to consumers of network investment, should be considered in the cost estimates assessed in a RIT-T or RIT-D. Where a concessional finance agreement, or other agreement for an external funding contribution, is made with the network service provider prior to the RIT, the agreement can be directly referenced and considered in the RIT assessment. However, where external funding contributions are not agreed during the ISP or the RIT process, there is some uncertainty as to whether external funding should be considered as part of these processes.

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34 AEMC, Final rule determination: National Electricity Amendment (Sharing concessional finance benefits with consumers) Rule 2024, March 2024.

35 AEMC, Concessional finance for transmission businesses - Information sheet, June 2023.

We consider concessional finance benefits that flow to consumers may be used to support a project option (by changing its ranking or timing) in the economic assessment process and can be facilitated under the NER and AER Guidelines. However, this is only where the concessional finance is used to reduce the cost of the project option by providing a benefit to consumers in the form of lower network tariffs. Our current view is concessional finance cannot be used to support a project option in the economic assessment process where the benefit is retained solely by the network service provider. This is because there is no change to the net benefit to consumers of the project option (as it is effectively a contribution to the network service provider and not to the project and so will not reduce project costs to consumers).

AEMC's determination recommends that the AER provide guidance on when concessional finance can be treated as 'expected' and relied on by AEMO, RIT proponents and the AER to support its inclusion in a cost benefit analysis.[36] This is because if the preferred option changes due to concessional financing and that financing does not eventuate, it may be necessary to re-run the cost-benefit analysis process to identify another preferred option and consider the implications for project timeframes.

Since concessional finance may reduce the cost to consumers of certain projects, this lower cost may be reflected in the cost-benefit assessment in RIT-Ts and RIT-Ds. However, concessional finance agreements may be intended or likely for certain projects, but may not be in place at the time that the RIT-T or RIT-D assessment is undertaken. In these circumstances, the RIT proponent will need to undertake the RIT based on the best information available at the time regarding the likelihood of a concessional finance agreement being in place. We expect RIT proponents to consult, as transparently as practicable, through the RIT process on the evidence informing its assumptions for the likelihood of a concessional finance agreement.

In submissions to the AEMC's rule change, stakeholders were divided on how the AER should confirm the intent to share the benefits of concessional finance with consumers. If a RIT proponent chooses to identify a concessional finance agreement in a RIT project report, they will be required to confirm the amount of concessional finance benefits that will be shared with consumers in their cost benefit analysis.

We consider that if a RIT proponent includes concessional finance benefits to be shared with consumers in a RIT but has not yet notified the AER of entering a concessional finance agreement for the project, the proponent should be required to:

- provide a signed statement that the RIT-T report contains the most up to date financing arrangement; and,
- that the conditions of the contract are achievable by the delivery of the project.

[36] AEMC, Sharing concessional finance benefits with consumers draft determination, December 2023.

Finally, where concessional finance flowing to consumers was expected and accounted for in a RIT-T does not eventuate, a RIT proponent would need to consider whether this constitutes a material change in circumstances for the project.

Questions

What evidence of the likelihood of a concessional finance agreement being put in place would be necessary before a RIT-T or RIT-D proponent can or should account for the effect of the concessional finance on the capital cost of credible options?

Are there non-confidential details of a concessional finance arrangement that a proponent should and could provide in their report?

Are there any specific areas that the AER could clarify using worked examples?

3.4 Improving the workability of the feedback loop

3.4.1 The issue

The feedback loop was first introduced as part of the actionable ISP reforms as a safeguard for electricity consumers. The feedback loop assessment requires that, after completing a RIT-T for an actionable ISP project, a transmission business must seek written confirmation from AEMO that:

- The preferred RIT-T option addresses the relevant need identified in the most recent ISP and aligns with the optimal development path (ODP) outlined in that ISP, and
- The costs of this option do not change the status of the actionable ISP project as part of the ODP.

Consistent with the AEMC's TPI Review Stage 2 Report, the AEMC's final rule on improving the workability of feedback loop[37] includes the following features:

- Enabling the feedback loop to be assessed against the most recent ODP in a draft or final ISP which is underpinned by the most up-to-date inputs, assumptions and scenarios.
- Requiring the AER to amend its CBA guidelines to provide guidance on the timing of a feedback loop request.
- Providing transmission businesses with the flexibility to carry out concurrent feedback loop assessment and contingent project application processes.
- Requiring AEMO to complete the feedback loop assessment within 40 business days (can be extended to 100 business days) from the later of the date the request is submitted, or additional information is received.

[37] AEMC, National Electricity Amendment (improving the workability of the feedback loop) Rule 2024, December 2023.

The final rule includes transitional provisions that recognise any consultation undertaken by the AER for the purposes of updating the CBA guidelines in anticipation of the final rule. The transitional provisions also apply the proposed feedback loop amendments to an existing actionable ISP project if the RIT-T proponent has not already requested a feedback loop assessment prior to the commencement of the rule.

Consistent with the transitional provisions as set out above, the AER has a general discretion to amend the CBA guidelines and the RIT application guidelines in accordance with the relevant NER consultation procedures referred to above.

3.4.2 Preliminary view and proposed approach to guidance

We propose to update the CBA guidelines to reflect the AEMC's final recommendations. Specifically, we propose to amend the CBA guidelines to:

- provide guidance on the timing of a feedback loop request
  - This is intended to include guidance that a TNSP should not submit a feedback loop request between the publication of the final IASR and the publication of the draft ISP
  - AEMO would retain the discretion to undertake the feedback loop during this time where appropriate given the circumstances of any particular request.
- give effect to and be consistent with the 40-business day timeframe for AEMO to complete the feedback loop to promote its timely completion. This includes the ability for AEMO to extend the period by up to a further 60 business days if the feedback loop assessment involves complexities or difficulties. This amendment is prescribed in the rule change.
- allow the contingent project application process and feedback loop assessment to proceed concurrently to limit delays in the regulatory process. This amendment is prescribed in the rule change.

Questions

We welcome stakeholder views on the proposed amendments to reflect the AEMC's final rule on improving the workability of feedback loop.

3.5 Early works contingent project application before completion of a RIT-T

The Minister for Climate Change and Energy proposed changes to the NER to allow transmission businesses to undertake early works before completing, or commencing, a RIT-T for actionable ISP projects.[38] The AEMC is currently considering this proposed rule

[38] Department of Climate Change, Energy, the Environment, and Water, Rule change request: encouraging earlier planning activities for efficient delivery of ISP projects - AEMO rule change project ref ERC0380, December 2023.

change. For administrative efficiency and to limit stakeholder consultation fatigue, we are consulting on updates to our guidelines to reflect this rule change, with the expectation that the final rule will be published before the end of our Guideline review.

We will not update our Guidelines on this issue until the final rule change determination is known. If the final rule change determination differs materially from the rule change proposal, we will undertake further consultation on appropriate updates to our Guidelines.

3.5.1 The issue

The proposed rule change would allow transmission businesses to undertake early works and recover early works costs for actionable ISP projects through a contingent project application before the RIT for the actionable ISP project has been completed (or even commenced).

The proposed rule change would define early works as activities undertaken by a transmission business in respect of an actionable ISP project prior to the construction of the preferred option, and which:

- improve the accuracy of cost estimates for that project; or
- facilitate that project being delivered within the timeframes specified by the most recent ISP.

The proposed rule change would allow AEMO to specify preparatory activities and early works for actionable projects in its ISP. Transmission businesses may then submit contingent project applications to the AER for early works relating to actionable ISP projects. These early works contingent projects may reflect the early works activities for the project specified by AEMO in the ISP or may relate to a different set of early works activities. Transmission businesses are not required to submit early works contingent project applications, even if AEMO identifies early works for the project in the ISP.

If the AER approves an early works contingent project application, the transmission businesses revenue determination will then be amended to allow the transmission business to recover costs for these early works.

Transmission businesses may submit an early works contingent project application relating to an actionable ISP project before the RIT for that actionable ISP project is completed. When the transmission business undertakes the RIT for that actionable ISP project it must ensure that the RIT considers any early works approved in a contingent project determination.

3.5.2 Preliminary view and proposed approach to guidance

There are three updates that we propose making to our Guidelines:

- Providing guidance for RIT proponents on how to consider approved early works contingent projects in RITs for actionable ISP projects.
- Requiring RIT proponents to transparently report early works costs already incurred, and forecasts of early works costs still to be incurred.

- Clarifying the process for staged ISP projects and interactions with early works contingent projects.

Accounting for early works costs in the RIT

The proposed rule change would require RIT proponents, when undertaking a RIT, to consider any approved early works contingent projects.

Typically, a RIT will consider costs already incurred by market participants, or costs that have not yet been incurred but which can be considered as 'committed', as sunk costs. Sunk costs would then not be included in the cost side of the cost-benefit analysis as these costs are incurred regardless of which credible option is determined to be the preferred option. Similarly, any benefits resulting from the sunk project will also be achieved regardless of the options selected in the RIT, and therefore not included in the benefit side of the cost-benefit analysis.

Prior to the rule change, early works, or any works relating to the identified need of the RIT project, cannot be undertaken before the RIT is completed. In this context, RIT proponents needed to consider committed works of related projects as sunk, but there were no committed or already incurred works that formed part of the RIT project itself.

However, the proposed rule change will allow early works to be undertaken before the RIT is completed. Where these early works relate to some but not all the credible options to address the identified need, treating these early works costs as sunk may affect the ranking of the credible options and prejudice the RIT outcome.

We recognise that if early works costs do not relate to the option that is identified by the RIT as the preferred option, then there is a risk that consumers will fund both the full cost of the preferred option and the sunk early works costs.[39] However, we expect that maintaining a RIT and cost-benefit assessment process that does not prejudice some options over others will encourage greater efficiency and cost reductions over time. We expect unbiased RIT processes to be more consultative, thereby providing greater discipline on cost and benefit estimates, and to better facilitate the scoping of non-network and third-party options. We expect these benefits to accrue not just in individual RIT processes, but through a dynamic process impacting all RIT processes over time. We also expect, to some degree, to manage the risks of early works being spent on non-preferred options through our contingent project assessments.

For this reason, we propose that costs of early works approved in a contingent project determination should be included in the cost forecast for the RIT even if they are sunk. Committed or already incurred costs that are not part of that contingent project determination should still be treated as sunk costs and not included.

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[39] The draft rule amendments included with both the AEMC's TPIR report and the Minister for Climate Change and Energy's rule change proposal provided that network businesses would recover early works costs from consumers through network charges, regardless of whether or not the early works costs relate to the preferred option identified in the RIT.

Transparency of early works costs

In completing a RIT, the proponent should include the full cost of each credible option, including any sunk costs funded through an early works contingent project determination (as discussed in the previous section). For transparency, the RIT-T proponent for actionable ISP projects should specify in the PADR and PACR the amount of sunk early works costs included in the forecast total cost for relevant options.

The activities funded via an early works contingent project may not be fully completed before the RIT is completed. The RIT proponent should then show both costs already incurred and forecast costs in the total cost of the project. This is illustrated in the following table.

Table 3.1 Stylised example of transparent reporting of early works costs within total cost forecasts

Cost	Amount ($m)
Early works already incurred (sunk)	150
Forecast remaining early works costs	50
Forecast other costs	1,200
Total cost	1,400

Transparently setting out early works costs already incurred, and forecasts of early works costs funded through a contingent project but still to be incurred, will assist stakeholders in understanding costs forecasts and cost forecasting accuracy.

Clarifying early works and staged ISP projects

Currently, our guidelines provide examples of staged ISP projects where the first stage of the project is for early works.[40] We propose to update these examples to distinguish between early works as a staged ISP project and early works undertaken through an early works contingent project.

Questions

How should early works costs already incurred, or committed through a contingent project determination, be treated in a cost-benefit analysis in a RIT?

[40] AER, Cost Benefit Analysis Guidelines - Guidelines to make the Integrated System Plan actionable section 4.4, October 2023.

Appendix A: Shortened forms

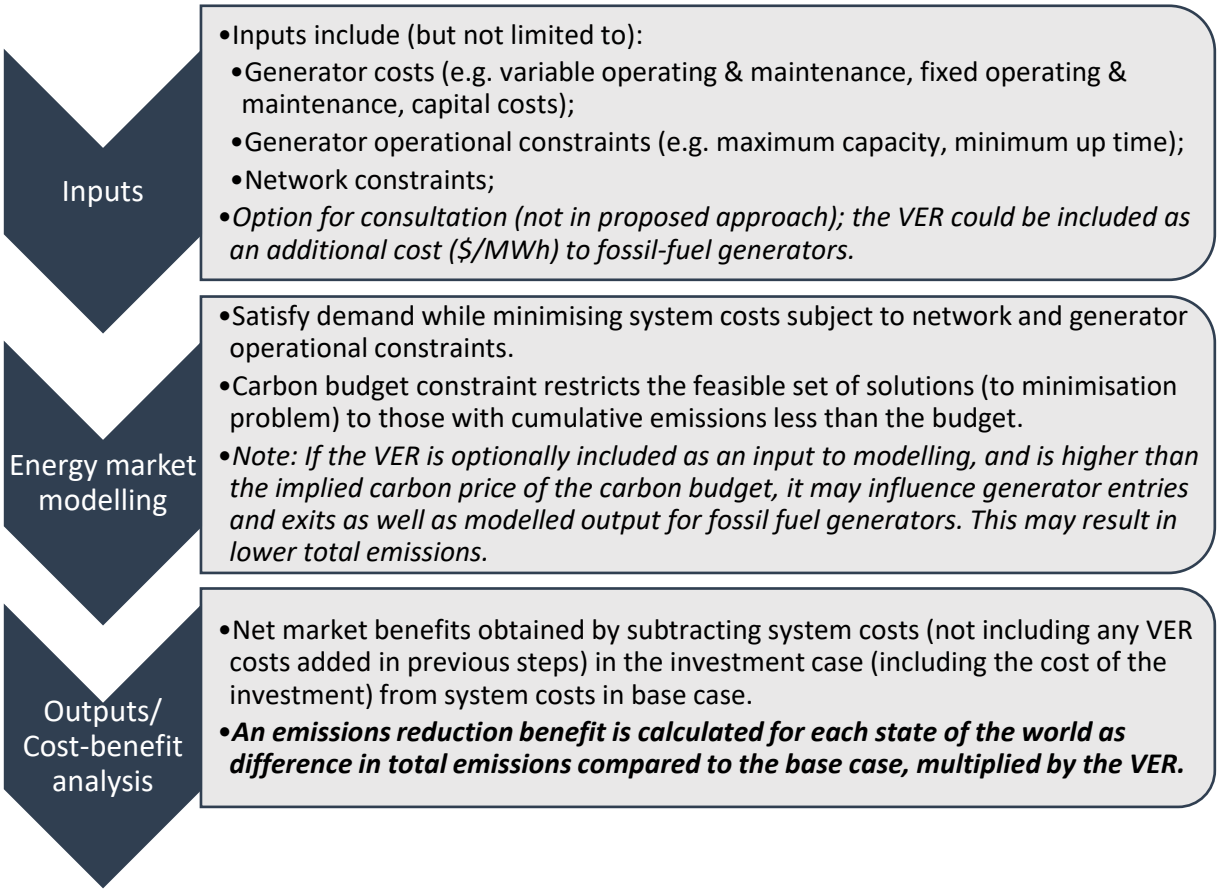
This appendix provides the extended form of key abbreviations used in this paper.

Shortened Form	Extended Form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CBA	cost benefit analysis
ISP	Integrated System Plan
NEM	National Electricity Market
NER	National Electricity Rules
ODP	optimal development path
PACR	Project Assessment Conclusions Report
PADR	Project Assessment Draft Report
RIT–D	regulatory investment test for distribution
RIT–T	regulatory investment test for transmission
TPI Review	Transmission Planning and Investment Review
VER	value of emissions reduction

Appendix B: Illustrative examples of valuing emissions reduction

This appendix works through illustrative examples of the inclusion of the VER in the development of the ISP and in a RIT. Figure B.1 is an overview of the main process steps, which may apply to either the development of the ISP or a RIT, where Figure 3.1 uses processes and terminology from the ISP process.

Figure B.1 Overview of the options for including the VER in ISP and RIT modelling



The base case for the cost benefit analysis is the case of no investment. In the ISP this is called the counterfactual development path, which includes only existing committed and anticipated projects, and is modelled in each scenario. In the base case for the RIT-T for actionable ISP projects, all the investment in the optimal development path is made, except for the actionable project which is the subject of the RIT-T.

It should be noted that the base case also includes any policies (including carbon budgets or the VER) that are present in the scenario. This is because the purpose of the cost-benefit analysis in the ISP or RIT is to assess the investment options and not the policy options.

A counterfactual scenario (rather than a counterfactual development path) that does not contain the carbon budgets could be established, and would enable us to analyse the effectiveness of the carbon budgets in each scenario, but would not directly assist in the analysis of the investment option.

Illustration of including the VER in the ISP

ISP market modelling runs an optimisation of loads and generation in a limited number of identified overarching scenarios. The model is subject to a set of constraints and functions which may be different in each scenario (including carbon budgets and demand growth, etc.).

AEMO models different combinations of investments to arrive at a set of candidate development paths, in each of which the generation mix is optimised. The candidate development paths are then compared to determine the optimal development path, which is the candidate development path which may maximise the present value of net economic benefit across scenarios.

According to the CBA guidelines, the counterfactual development path is the status quo or base case that AEMO uses to compare development paths in the ISP CBA. Specifically, AEMO estimates the market benefits of each development path by comparing it to the counterfactual development path, in each scenario. The counterfactual development path includes only existing committed and anticipated network investments.

When two candidate development paths are compared in order to rank them, the base case volume of emissions 'cancels out' and only the difference in the volume of emissions between the two cases is relevant to the result. This is expected as the base case is the same across all states of the world. The inclusion of an emissions reduction benefit in the development of the ISP is illustrated in Table B.1.

As noted above it is also possible to include the VER as an input to modelling, as an additional cost ($/MWh) to fossil-fuel generators. This may result in an optimised generation mix with lower emissions but may also increase generation costs in the modelling output. Although not recommended in our preliminary position, this effect is shown in the last column of Table B.1.

Illustration of including the VER in a RIT-T or RIT-D

RIT-T market modelling assumes that all other investment decisions match the optimal development path. The proponent models the base case where all investment in the optimal development path is made, except for the actionable project which is the subject of the RIT-T.

To calculate emissions and include emissions reduction as a class of market benefit, RIT-D proponents will also need to adopt this modelling approach for the RIT-D.

The option of no investment in the project which is subject to the RIT must be modelled. This is because the option of no investment underpins the calculation of the benefits of making the investment, including the benefit of emissions reduction.

The net benefit of a credible option must be positive, except where the identified need is for reliability corrective action. However, once the proponent verifies that a credible option has a net benefit, only the differences between the credible options are relevant to the ranking of options and the selection of the preferred option.

The inclusion of an emissions reduction benefit in a RIT-T or RIT-D is the same as for the ISP in Table B.1, except that the base case of no investment replaces the counterfactual

development path and credible options are modelled instead of candidate development paths.

When credible options are compared in order to rank them, the base case emissions cancels out and it is the difference in emissions between the two options that affects the result. The credible option that maximises the present value of the net economic benefit, including the emissions reduction benefit, is the preferred option.

Table B.1 Illustrative example of including VER in the development of the ISP

		No VER	VER used for ranking candidate development paths	VER as an input to modelling, and for ranking candidate development paths
Committed projects only (base case)	Emissions (tonnes)	E	E	F (<E)
	Emissions reduction benefit ($)	0	(E-E)*VER = 0	(F-F)*VER = 0
	Generation costs ($)	G	G	H (>G)
	Net benefit ($)	0	0	0
Candidate development path 1	Emissions (tonnes)	A	A	B (<A)
	Emissions reduction benefit ($)	0	(E-A)*VER	(F-B)*VER
	Generation costs ($)	C	C	D (>C)
	Net benefit ($)	NB1	NB1+(E-A)*VER	NB1+(F-B)*VER-((D-C)-(H-G))
Candidate development path 2	Emissions (tonnes)	W	W	X (<W)
	Emissions reduction benefit ($)	0	(E-W)*VER	(F-X)*VER
	Generation costs ($)	Y	Y	Z (>Y)
	Net benefit ($)	NB2	NB2+(E-W)*VER	NB2+(F-X)*VER-((Z-Y)-(H-G))

Appendix C: Summary of questions

Question	Section
Valuing emissions reduction in CBA/RIT	
How should emissions reduction benefits be included in the RIT and cost benefit analysis guidelines?	3.1
Do you have any views on the option to include the VER in the inputs to market modelling as a cost ($/MWh) on fossil-fuel generators in terms of both its application and the potential outcomes from its application?	3.1
Do you have any views on the implications of the current carbon budget methodology remaining in place at the ISP input stage while the VER contributes to the assessment of the relative net benefit of different development pathways and investment options?	3.1
Are there alternative approaches to estimating an emissions reduction benefit, and if so, what are the advantages and disadvantages of alternative approaches that should be considered?	3.1
Which additional material factors should be considered in modelling emissions? How should data to support these factors be sourced? Should the AER consider including specific guidance on any of the factors?	3.1
Social Licence - Identifying credible options in a RIT-T assessment	
What factors or criteria should a RIT-T proponent consider when determining whether a project: • is going to be delayed, or is not likely to proceed such that the project is no longer technically feasible? • is not likely to be delivered in sufficient time to meet the need?	3.2
What might be some objective measures of any factors identified above?	3.2
If initial community engagement indicates that an option may not be credible, what further engagement or other action should a transmission business undertake to determine if an option may later become credible?	3.2
Social Licence - Costs and market benefits in ISP and RIT-T assessments	
Is there a need to clarify costs and benefits that may be included in the RIT-T to address social licence issues? What worked examples would be useful?	3.2
Are any additional classes of costs and market benefits necessary to address social licence issues, and available within the framework provided by the Rules?	3.2
How could the effect of delays on the costs and market benefits of each credible options be assessed and justified?	3.2

Question	Section
If a RIT-T were to include forecast expenditure on social licence activities to address an identified reduction in market benefit due to project delay, what justification would be required to demonstrate this expenditure will reduce the potential project delay?	3.2
Social Licence - Community engagement - Enhancing community engagement in transmission building	
There are several areas of the Guidelines for which clarification may be provided following the updated definition of 'interested party'. We are seeking stakeholder feedback around the provision of these clarifications.	3.2
We are also seeking views on whether the Guidelines should be prescriptive about these matters or should set out principles within which RIT-T proponents should operate.	3.2
The definition of stakeholders that are "reasonably expected to be affected by the development" of the project: • What criteria should be used to establish when a stakeholder is 'reasonably expected' to be affected? Are there conditions to consider other than the presence of a stakeholder group in the geographical area of a project? • What threshold should be considered when assessing whether a stakeholder is 'reasonably expected' to be affected? To what extent are RIT-T proponents able to assess the materiality of effects on stakeholders before engaging with them?	3.2
How should interested parties be identified? • Should reasonably affected stakeholders be identified nominally, by constitution of a list in advance? • Should RIT-T proponents identify specific affected stakeholders, or rather ensure that the consultation addresses each category of stakeholder? • Is it necessary or sufficient to have representation of each category of stakeholders?	3.2
Social Licence - Community engagement - Planning stakeholder engagement	
While community engagement expectations require that "reasonable endeavours" should be used, how should this be interpreted and what would be the minimum expectations for tailoring engagement materials and communication methods to meet the needs of different stakeholders?	3.2
The community engagement expectations include that "stakeholders (will be) provided with a range of opportunities to be regularly involved throughout the actionable ISP projects, future ISP projects and REZ stages". Should there be guidance on what opportunities for regular involvement the RIT-T proponent could consider providing stakeholders with?	3.2

Question	Section
What requirement should the guidelines contain for a RIT-T proponent to publish an engagement plan on how it will make reasonable endeavours to satisfy community engagement expectations?	3.2
How can we promote continuity and avoid duplication between AEMO's engagement work, and the engagement undertaken by the RIT-T proponents?	3.2
Social Licence - Community engagement - Engagement on draft and final reports	
For the draft and final reports, is the normal means of consultation (by publication on proponent and/or AEMO website) sufficient to be in accordance with the expectations?	3.2
What should we require proponents to include about stakeholder feedback in the draft and final reports?	3.2
Sharing concessional finance benefits with consumers	
What evidence of the likelihood of a concessional finance agreement being put in place would be necessary before a RIT proponent can or should account for the effect of the concessional finance on the capital cost of credible options?	3.3
Are there non-confidential details of a concessional finance arrangement that a proponent should and could provide in their report?	3.3
Are there any specific areas that the AER could clarify using worked examples?	3.3
Improving the workability of the feedback loop	
We welcome stakeholder views on the proposed amendments to reflect the AEMC's final rule on improving the workability of feedback loop.	3.4
Early works contingent project application before completion of a RIT-T	
How should early works costs already incurred, or committed through a contingent project determination, be treated in a cost-benefit analysis in a RIT?	3.5