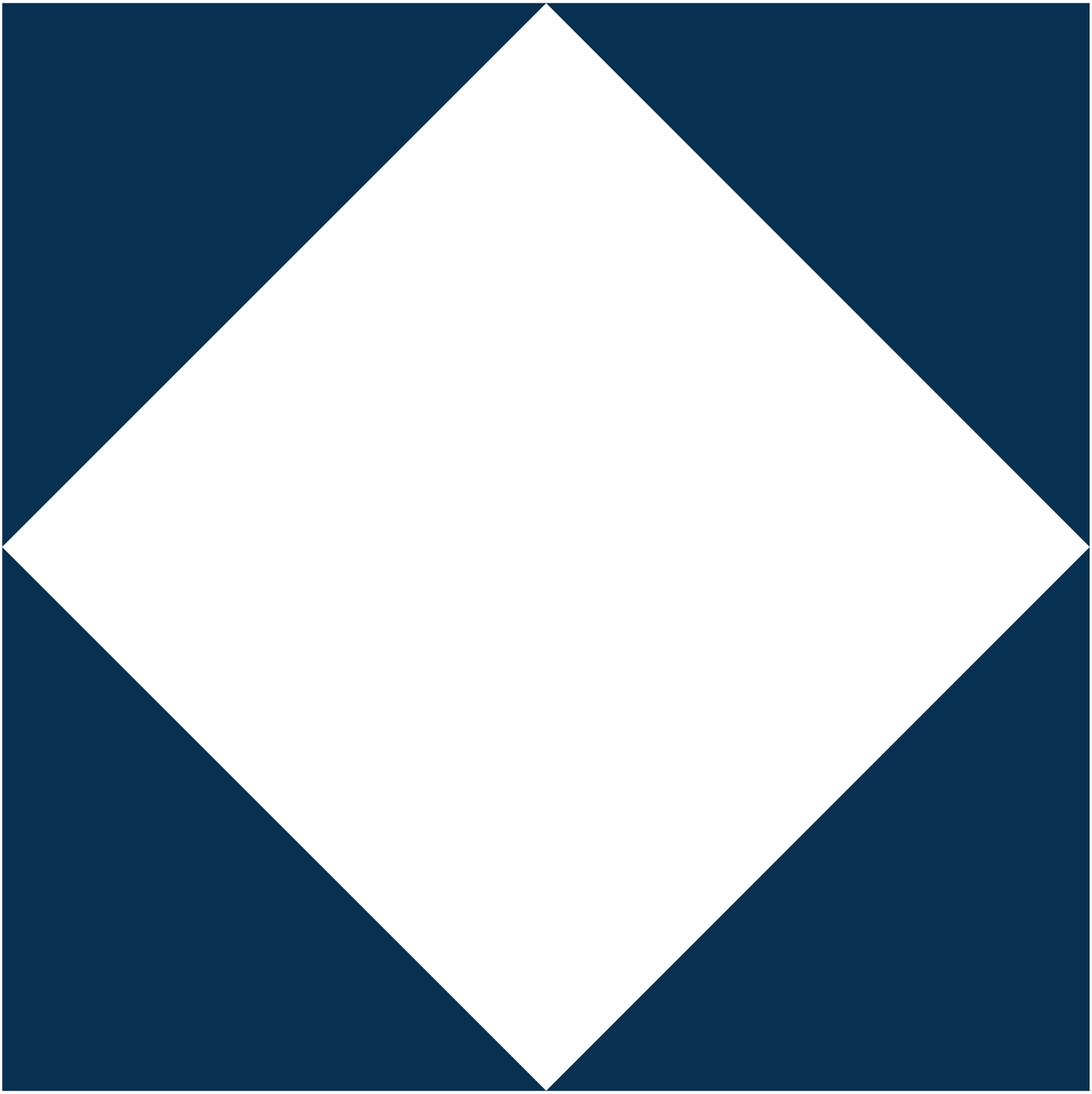

Transmission contestability principles

Report for Energy Networks Australia on criteria and principles for assessing whether contestability of transmission services is likely to benefit consumers

9 August 2021

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Executive Summary

This report sets out criteria and principles for assessing whether contestability of electricity transmission projects is likely to promote the long term interests of electricity consumers. The aim of this report is not to make recommendations on whether contestability is appropriate. Instead, we have sought to develop criteria and principles that can be applied by policy makers to assist efficient and transparent decision making on this issue and to help inform submissions to any reviews of contestability policy.

Given the various different types of transmission projects and the range of functions involved in delivering those projects, the potential costs and benefits of contestability is likely to vary depending on the functions and projects involved. There are also a range of potential models for transmission contestability. Accordingly, the criteria and principles are designed to be used to assess:

- For particular types of transmission projects, would contestability of some or all of the functions involved in delivering those projects be likely to promote the long term interests of electricity consumers? If so, which functions and which types of projects, and why?
- If contestability is likely to benefit consumers, what model of contestability is likely to best promote consumer interests?

The report focusses on 'actionable ISP projects' under the Integrated System Plan (ISP) or Renewable Energy Zones (REZs) and other major transmission projects that are developed under state or territory government renewable energy policies.

CONTEXT AND PROBLEM DEFINITION

Contestability of transmission services was considered extensively by the Australian Energy Market Commission (AEMC) and the Energy Security Board (ESB) as part of a series of reviews and rule changes between 2015 and 2020 on transmission connection and planning arrangements and actioning the ISP. Some of those new rules, such as the ISP arrangements, are still in the process of being applied for the first time.

However, contestability of transmission services has recently been raised again by the ESB in its Post 2025 Electricity Market Design options paper. The appropriate scope of contestability is also expected to be reconsidered by the AEMC in its upcoming transmission investment and planning review and by the NSW and Victorian governments in their work on REZs. The AER also suggested that there could be benefits in increased contestability in its recent review of large transmission projects and commissioned a report from HoustonKemp on potential contestability models.

Despite this recent renewed interest in contestability, the 'problem definition' that contestability is seeking to solve has not been well defined by many stakeholders advocating for increased transmission contestability.

There appear to be a range of views on the potential benefits of contestability and the reasons for considering the potential scope of increased contestability. Some stakeholders claim (generally without any evidence) that contestability could reduce costs and speed up investments. However, a significant amount of the support for contestability seems to be based on a more general lack of trust in TNSPs, a disillusionment with the current regulatory framework and a view that it will not support the level of investment required to transition to renewables. There is also concern from some stakeholders that under the current regime TNSPs have a sole right to undertake shared transmission network investments but

they cannot be compelled to invest, which could create uncertainty about the timely delivery of actionable ISP projects.

Drawing on comments by key stakeholders including the ESB, AEMC, AER, state governments and submissions from consumer groups and generators, we summarise stakeholders' main reasons for reviewing transmission contestability as:

> *The large size of proposed major transmission investments under the ISP and state government renewable energy policies justifies considering whether, compared with monopoly provision of prescribed transmission services by the Primary TNSP, contestability of certain transmission services could:*
> - *reduce total system costs;*
> - *speed up the delivery of major transmission projects;*
> - *increase innovation, including addressing TNSPs' perceived bias towards network solutions;*
> - *enable state governments to play a more active role in overseeing decisions on major transmission investment projects; and/or*
> - *address the potential risk that TNSPs have a sole right to undertake shared transmission network investment under the current regulatory regime but cannot be required to do so, which could delay investments.*

POTENTIAL CONTESTABILITY MODELS

There are a range of potential models for contestability, which are discussed at a high level in this report.

In addition, whether contestability is in the long term in interests of consumers is unlikely to be a binary decision for all electricity transmission assets and services but could vary across different types of functions involved in the provision of transmission services and different types of assets.

We set out 10 functions involved in the provision of transmission services: defining the identified need, option selection, community engagement, functional specifications, other early works, detailed design, construction, ownership, operation, maintenance.

We recommend that an assessment of the suitability of contestability is made against each function, including an assessment of the risks and costs that could result from splitting accountability for different functions. We consider that some of these functions are more suitable for contestability than others and note that TNSPs already undertake contestable procurement for several of these functions.

The appropriate scope of contestability is also likely to vary for different types of transmission projects or assets. The key consideration is likely to be the extent to which the relevant assets are separable from the existing transmission network so that accountability for them can be separated from accountability for the rest of the network without creating risks for users of the shared network.

COSTS AND BENEFITS OF CONTESTABILITY

In many other markets, increased competition in the provision of services has the potential to deliver a range of benefits for consumers including:

- Short term cost reductions though improvements in productive efficiency if contestable providers are able to provide services more efficiently than the incumbent.
- Short term reductions in prices for consumers due to reduced profit margins of suppliers.

- Long term cost reductions through improvements in dynamic efficiency, for example from increased innovation.
- Faster delivery of services due to competition between suppliers, particularly if competition can be used as an alternative to administrative mechanisms that take longer to complete.
- Greater choice and improved service for customers.

Competition will almost always lead to lower prices and better outcomes for consumers than an unregulated monopoly. However, the relevant question when assessing the suitability of contestability for electricity transmission is whether these potential benefits will be realised when compared with the counterfactual of regulation as a prescribed transmission service.

There are a range of reasons why these benefits may not be realised for transmission services, or the materiality of benefits may not be sufficient to outweigh the costs, including:

- Regulated prices may be lower than prices under contestability, particularly given how regulated rates of return currently compare with competitive returns for other electricity investments. There is also a risk that competitive providers may expect a shorter period for the recovery of their capital compared with the current long depreciation periods applied to set prices for regulated investments.
- Regulated TNSPs already undertake competitive procurement for those functions that make up the largest elements of the costs of the provision of transmission services. These costs include construction costs and account for up to 80% of total costs of major projects. There may be very limited benefits in introducing contestability for other functions, or the benefits of doing so may not be great enough to outweigh the additional costs created by contestability.
- Contestability may not speed up investment processes and the delivery of services compared with regulation (except at the expense of reductions in transparency and consumer engagement). Experience shows that the current Victorian contestability arrangements can lead to delays compared with the regulated monopoly model in the rest of the NEM.
- Other than for connection assets funded by a generator, contestability of transmission services is unlikely to result in any changes in service quality or increased customer choice.

The potential costs of contestability for transmission services also include risks of:

- A detrimental impact on security, reliability or safety due to loss of clear singular accountability for the overall transmission system (unless overall accountability for contestable transmission assets is allocated to a party such as AEMO in the Victorian model or a Primary TNSP that contracts with all contestable providers).
- A potential adverse impact on the effectiveness of consultation with consumers, local communities and other stakeholders due to a loss of clear singular accountability for transmission planning.
- Inefficient incentives, including a risk that a contestable provider who is only responsible for certain parts of the network may have incentives to minimise the costs of those network elements at the expense of total system costs and long term security and reliability.
- Implementation costs and increased ongoing costs to manage coordination issues.
- Coordination challenges and associated contractual complexity.
- The loss of economies of scale and scope.
- Necessary rule or other regulatory changes not being made to properly manage these risks, particularly given that these reforms would be very complex and require changes to laws, rules, licences and other regulatory instruments by various national and state/territory bodies to protect consumers.

CRITERIA AND PRINCIPLES

Approach to developing the criteria and principles

We have developed criteria and principles to guide decisions on contestability:

- **Contestability policy criteria**: Overarching criteria to be applied when assessing whether contestability of electricity transmission services is likely to promote the long term interests of electricity consumers compared to the counterfactual of a regulated service and, if so, what model of contestability is most appropriate.
- **More detailed principles to guide decisions on the scope and form of contestability:** These more detailed principles elaborate on the above criteria where necessary. These principles should be applied:
  - when deciding which specific electricity transmission services or projects should be subject to contestability; and
  - if some degree of contestability is adopted, when developing the arrangements for contestability and assessing various potential models of contestability so that contestability promotes the long term interests of consumers.

The important high-level considerations are set out in the criteria, and for some purposes the criteria may be all that is needed. The principles contain more detail to help decision makers understand and apply the criteria. We consider that the more detailed principles can act as a useful check-list for decision makers.

The main body of this report gives a fuller explanation of each of the relevant principles and whether they apply to the 'scope of contestability', the 'form of contestability' or both.

Criteria and principles

We have developed 6 overarching criteria for guiding contestability policy decisions, which are set out below.

Below each criterion we also set out the relevant principles that elaborate on their application when determining the appropriate scope or form of contestability.

1. Clear accountability | **Provide for clear accountabilities, including accountability for maintaining the security, reliability and safety of the overall transmission network and its various elements.**
   - **Overall accountability for security, reliability and safety:** To deliver outcomes that benefit consumers, there must be clear accountability for the overall security, reliability and safety of the transmission network.[1] There should be a single body with overall accountability for these matters in the relevant area and the ability to provide an end-to-end transmission service to connecting parties.
   - **Separability:** The appropriateness of contestability for major transmission projects will depend on the extent to which the relevant assets are separable from the remainder of the transmission system, i.e. can accountability for them be separated without creating disproportionate costs and risks for transmission providers and users of the rest of the shared network. This assessment should consider the potential future development of the network and not just the current design given AEMO's forecasts that significant network

[1] This report focusses on the 'transmission network' as defined in the NER, which includes Identified User Shared Assets and Designated Network Assets but does not include 'connection assets'.

augmentation will be required over the coming years to connect renewables and meet increased demand from electrification of transport and other sectors.

- **Clear allocation of responsibilities and level playing field:** To ensure service outcomes to consumers are not adversely affected, there should be a clear allocation of accountability for all relevant regulatory obligations for all relevant functions and assets. All providers of transmission services should be subject to the same licensing and registration requirements and other appropriate regulatory obligations to protect security, reliability, safety and other relevant matters.
- **Allocation of roles:** The allocation of roles should allocate risks to those who can best manage them, recognise the incentives of the relevant parties, and be supported by appropriate governance and resourcing of the relevant parties.

2. Cost | **Minimise the cost to consumers, based on long term total system costs.**
   - **Clear identification of problem definition and comparison of competition vs regulation over the long term:** An assessment of contestability should start with a clear identification of the problems that are sought to be addressed. The potential costs and benefits of competition in relation to each of those problems should be compared with the costs and benefits of a regulated service. This assessment should consider total system costs over the long term (i.e. at least the entire lifecycle of the assets).
   - **Materiality of benefits:** Contestability should focus on those services or assets where there is significant scope for competition and cost savings and where those potential savings are large enough to justify the costs of implementing contestability and any adverse impact on other principles.
   - **Depth of the market:** Contestability should focus on those functions and projects where there are likely to be lower barriers to entry and a higher prospect that competition will lead to lower costs, noting that all electricity transmission services require specialist skills and are likely to have relatively high barriers to entry.
   - **Competition in related markets:** Increased competition for transmission services should not come at the expense of competition in other markets (where that competition benefits consumers).

3. Timeliness | **Facilitate timely transmission investment and connections processes.**
   - **Avoiding unnecessary complexity and coordination challenges:** Minimising costs and delays while maintaining security, reliability and safety for consumers requires coordination between the respective parties. Contestability should focus on those services or assets where coordination challenges between multiple parties can be more easily avoided or resolved and unnecessary complexity can be avoided. Any new arrangements should not lead to the risk of disproportionate delays in investment or connection processes.

4. Transparency | **Promote transparency and consumer and local community engagement in investment decision making and revenue recovery.**
   - **Consumer and community engagement:** Contestability should not result in a reduction in opportunities for meaningful consumer and local community engagement in investment decisions, route selection and cost recovery. There should be clarity for local communities and consumer groups as to who they engage with on these matters, preferably through a single entity who is accountable for them.
   - **Transparency of investment decision making:** Contestability should not reduce the transparency of planning and investment decisions and the resulting cost impacts on

consumers. Investment decisions should be made on a transparent basis by an appropriately qualified and resourced independent body applying tests based on the long term interest of consumers.

- **Transparency of regulation and cost recovery:** There is a clear framework for how monopoly prescribed transmission services are regulated and how the costs are recovered. There should be similar clarity and transparency regarding how any contestably provided services will be regulated and how the costs will be recovered.

5. Incentives and risk allocation | **Create incentives for efficient behaviour, innovation in network and non-network solutions and efficient allocation of risks, including aligning risks and rewards so that parties are appropriately remunerated for the risks they bear.**
   - **Incentives:** Contestability decisions should recognise the relevant parties' incentives and ability to manage risk. A contestable provider who is only responsible for certain parts of the network may have incentives to minimise the costs of those network elements at the expense of matters such as total system costs, long term security and reliability or community engagement on route selection. For-profit TNSPs with financial incentives and the ability to take on certain risks may be more likely to make timely connection and investment decisions than non-profit government bodies that cannot take on risk. Conversely, TNSPs may have greater incentives to favour network solutions over non-network options, to the extent this risk cannot be readily mitigated by the RIT-T or other regulatory tools.
   - **Aligning risks and rewards:** Risks and rewards should be aligned so that parties are appropriately remunerated for the risks they bear. If the functions related to providing transmission services are separated and some roles are made contestable, the impact of this separation on the appropriate returns for services that remain regulated needs to be addressed.
   - **Flexibility:** While maintaining clear accountability, the arrangements should be sufficiently flexible and not overly prescriptive so that they can apply in a range of circumstances and jurisdictions.
   - **Subsidiarity and local knowledge:** Issues should be dealt with at the most local level that is consistent with their resolution.

6. Regulatory predictability | **Regulatory arrangements should take account of the long-lived nature of major transmission investments and give investors, transmission businesses, market participants and consumers confidence in how those assets will be regulated over their life. This means any changes to regulatory arrangements should be predictable, subject to consultation and mindful of their potential impact on current and future investments.**

1. Context and problem definition

1.1 WHAT IS 'CONTESTABILITY' IN THIS CONTEXT?

Contestability for transmission services already exists to an extent in the NEM but several recent reports have raised the prospect of increased 'contestability'. However, those reports have generally not defined 'contestability' in this context. There are also many different forms of contestability that could be adopted.

'Contestability' in this context should refer to the right (but not the obligation) to use a competitive process to choose the supplier of a service. The definition of contestability should focus on the functioning of markets, without necessarily requiring a formal competitive process for every transaction or expecting that there will be 'perfect competition' with no barriers to entry. The risk that a customer may run a competitive process for the current transaction, or for future transactions, may be enough to promote many of the efficiency benefits of contestability provided there is an ability for other suppliers to enter the market.

One challenge in applying contestability to most transmission services is that it is not immediately clear who the 'customer' is and who should have the right to decide whether to undertake a competitive process. Because the transmission system is a complex, single interconnected system with open access and must provide high levels of reliability, security and safety, decisions on the scope of contestable transmission service provision generally need to be made by policy makers, not by market participants themselves. For most transmission services other than connection services, this is likely to require an independent party to undertake the competitive procurement process on behalf of consumers as a whole, or have a right to do so if not satisfied with the terms offered, or expected to be offered, by the incumbent TNSP.

Another challenge is that even where contestability applies, barriers to entry may remain given the high level of capability required to provide transmission services. When assessing the potential benefits of contestability in transmission services, the comparison needs to be with a regulated TNSP providing prescribed transmission services. This contrasts with some other sectors where economic regulation is not available as a viable alternative and competition will clearly deliver better outcomes than an unregulated monopoly. It is less clear whether contestability for particular functions or projects in a market with specialist skills, relatively high barriers to entry and considerable economies of scale and scope will result in better outcomes than regulation.

Contestability is common in other infrastructure sectors such as roads and has been adopted in other parts of the energy sector. A key difference between electricity and some other sectors where contestability has been adopted is that when contestability has been adopted in electricity (e.g. Victorian transmission, metering outside Victoria, retail electricity) the technically complex nature of these services has generally needed more prescriptive rules to try to manage coordination challenges and allocate accountabilities and risks. This appears to be partly due to the lack of a single counterparty who can take on risks in the same way that sponsoring customers or governments can in other sectors and partly due to the increased need for coordination and clear overall accountability for the operation of the integrated system.

1.2 CURRENT ARRANGEMENTS FOR TRANSMISSION CONTESTABILITY

The appropriate scope of contestability has been considered in several reviews and rule changes over the past decade, as discussed in Appendix A. Contestability of transmission services was considered extensively by the AEMC between 2015 and 2018 as part of its rule change on Transmission connection and planning arrangements and its Coordination of Generation and Transmission Investment (COGATI) review. The ESB also considered a range of potential different planning and contestability models as part of its advice to governments and rules for actioning the ISP in 2020.

Contestability already exists in the NEM to a varying extent for different types of transmission services, for example:

- Certain types of discrete transmission assets are fully contestable and not economically regulated, e.g. connection assets and Market Network Services Providers (i.e. Basslink).
- Defined functions related to other transmission network assets are also contestable, e.g. design, construction and ownership of Identified User Shared Assets (IUSAs) and Designated Network Assets (DNAs).
- Transmission Network Service Providers (TNSPs) currently undertake competitive tenders for the construction of all major transmission projects, which accounts for a high proportion of costs.
- The Regulatory Investment Test for Transmission (RIT-T) requires TNSPs to assess the costs and benefits of all credible options including contestably procured non-network options.
- In Victoria, augmentations to the shared network are contestable if they are 'separable' and the estimated capital cost exceeds $10 million. This contestability model is supported by detailed regulatory arrangements governing AEMO's Victorian transmission role, where AEMO has overall accountability for planning the Victorian declared transmission network and procuring augmentations from AusNet Services or other Declared Transmission System Operators (DTSOs).

Outside of these defined circumstances, other transmission services are generally provided by a single TNSP in the region – the Primary TNSP[2] – and there are restrictions under the National Electricity Rules (NER) on the ability of other parties to provide those services.

The key theme of the AEMC's various reviews and rule changes on transmission contestability that led to the current arrangements outside of Victoria is that to maintain clear accountability the Primary TNSP should have the exclusive right to operate and maintain the shared transmission network and develop the functional and technical specifications for any augmentations to it. The AEMC permitted contestability for various functions related to connections and for the construction and ownership of certain network augmentations to facilitate connections on the basis that doing so could reduce costs for connecting parties. However, it considered that contestability of other functions would undermine accountability for the reliability, security and safety of the transmission network.

1.3 WHAT PROBLEMS COULD CONTESTABILITY BE SEEKING TO ADDRESS?

The ESB's Post 2025 options paper, the AER's review of large transmission investments and HoustonKemp's report for the AER (discussed in Appendix A) have raised the possibility of extending transmission contestability for large transmission investments such as actionable ISP projects. Several stakeholders also supported increased contestability of transmission services in submissions to previous

[2] In some jurisdictions there is more than one TNSP, e.g. TransGrid, Ausgrid and Directlink in NSW, but one TNSP is the Primary TNSP.

AEMC reviews and rule changes, submissions to the ESB's options paper and submissions to recent state government consultations such as the Victorian REZ Development Plan.

However, it appears to us that the 'problem definition' is not currently well defined and that several of the key bodies advocating for increased transmission contestability have not been clear (in public at least) what problem contestability is seeking to solve or how increased contestability may be affected by the specific context or a decision.

There appear to be a range of views on the potential benefits of contestability and the reasons for considering the potential scope of increased contestability. The main reasons given by key stakeholders for supporting increased contestability, or a review of contestability, are as follows:

- **ESB |** The ESB's Post 2025 Options Paper only discusses contestability extremely briefly. The ESB's problem definition appears to be based on a view that contestability could speed up the delivery of ISP projects and reduce their cost, but no evidence is given for that view:[3]

  Challenges are emerging in getting the new transmission projects built, and the costs of investing too late can be substantial...

  Recent actionable ISP Projects have seen a significant increase in costs (QNI, Project EnergyConnect) and additional funding options such as contestability may also need to be considered to deliver these projects at least-cost

- **AER |** The AER's letter to stakeholders commencing its review of large transmission projects stated the AER would consider potential reforms to introduce more competition for these large projects on the basis that:[4]

  This could deliver greater productive efficiencies through more innovative solutions, and reduce the need for regulatory assessment of expenditure forecasts.

- **HoustonKemp report for the AER |** HoustonKemp's report for the AER's review contains a clear problem definition based on a view that TNSPs have a bias towards network solutions and competition could deliver more innovative solutions: [5]

  One of the key benefits to the introduction of competition is the additional rigour that this provides in seeking innovative solutions, a process that is difficult to incentivise by administrative means...

  TNSP-led solution selection and implementation gives rise to the risk that the preferred solution is not the most optimal, because of the intrinsic preference of TNSPs for network-focused as distinct from non-network options.

- **AEMC |** Previous AEMC reviews and rule changes that have increased contestability have been focused on transmission services and assets that are required to facilitate connections. The AEMC has consistently considered that there is a trade-off between the potential benefits of contestability and its risks to accountability for security, reliability and safety:[6]

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3 Energy Security Board, *Post 2025 Market Design Options – A paper for consultation*, 30 April 2021, pp 11

4 AER, *letter to stakeholders 'Re: AER work program to support efficient delivery of actionable ISP projects – stakeholder views sought'*, 17 November 2020, p11.

5 Houston Kemp, *Regulatory treatment of large, discrete transmission investments*, 19 August 2020.

6 AEMC, *Transmission Connections and Planning Arrangements Rule 2017, final determination*, p35.

While contestability for the provision of these services may improve the transparency, timeliness, cost and complexity of connections to the transmission network for the connecting party, such an approach blurs the incumbent TNSP's accountability for the operation of the shared network, potentially affecting end-use consumers. Inadequate provision of such services may have an impact on the safe, reliable and secure supply of electricity across the shared transmission network.

- **State governments |** The creation of new state government bodies (e.g. VicGrid, NSW Consumer Trustee) arguably lend themselves to increased contestability for investments in transmission service as part of a REZ (or the potential for changes to the current model of contestability in Victoria), particularly where state governments want to take a more active role in planning and overseeing the delivery of the transmission investments rather than leaving important decisions to AEMO or regulated TNSPs and the current ISP, RIT-T and AER processes. For example, the Victorian government's REZ Development Plan Directions Paper states:

  The Government is establishing VicGrid to actively plan and develop Victoria's REZs, including planning and investing in REZ network infrastructure, identifying and applying appropriate procurement, cost recovery and co-funding approaches, facilitating renewable energy generation projects in Victorian REZs, and working with communities to plan REZs and ensure local benefits from REZ development.

- **Submissions |** Submissions to various processes show that some generators and consumer groups support contestability for a range of reasons. However, there appear to have been very few comments on this issue in submissions to the ESB's Options Paper and not strong support for changes. Most generators supported maintaining some degree of transmission contestability in submissions to the Victorian REZ Development Plan Directions Paper. Based on submissions to various processes and our discussions with stakeholders, the attraction to contestability from some generators and consumer groups seems to be based on a range of factors:
  - Some generators consider that contestability could reduce costs and speed up investments, e.g. the Clean Energy Investor Group is the leading generator advocate for the argument that contestability could reduce costs.
  - There is also a general lack of trust in TNSPs by some consumer groups and generators, who see contestability as a good way to test TNSPs' proposed solutions and costs given the large size and cost of proposed ISP projects.
  - The support for contestability from some stakeholders appears largely based on a general disillusionment with the current regulatory framework and a view that it will not support the level of investment required to transition to renewables. Concerns about whether the current regulatory settings will support the required level of investment also seem to be shared by some TNSPs and their owners who consider that the current AER rate of return and other aspects of the regulatory framework are insufficient to support financing of major transmission projects.
  - Related to the above point, some stakeholders appear drawn to contestability of asset ownership as a solution to the risk that regulated TNSPs with the sole right to undertake investment may refuse to invest or delay investments. This could lead to concerns that there is no certainty that actionable ISP projects that pass a RIT-T will be built or concerns that these investments may be delayed.
  - Some consumer groups appear supportive of some models for contestability, particularly if combined with alternative funding models where generators or governments fund transmission investments for REZs instead of consumers, but oppose any changes that would reduce transparency and consumer engagement (e.g. EUAA opposes substituting the RIT-T for a competitive procurement approach).

Drawing on the above views we summarise stakeholders' main reasons for reviewing transmission contestability as:

> *The large size of proposed major transmission investments under the ISP and state government renewable energy policies justifies considering whether, compared with monopoly provision of prescribed transmission services by the Primary TNSP, contestability of certain transmission services could:*
>
> - *reduce total system costs;*
> - *speed up the delivery of major transmission projects;*
> - *increase innovation, including addressing TNSPs' perceived bias towards network solutions;*
> - *enable state governments to play a more active role in overseeing decisions on major transmission investment projects; and/or*
> - *address the potential risk that TNSPs have a sole right to undertake shared transmission network investment under the current regulatory regime but cannot be required to do so, which could delay investments.*

However, we do not consider that any of the above reports actually demonstrate that these benefits are likely to be achieved. In addition, most of these reports are unclear about what specific circumstances or models for contestability are contemplated. In particular, none of them undertake a comparison of the potential costs and benefits of particular models of contestability compared with provision by a regulated TNSP as a prescribed transmission service in relation to costs, timeframes or any of the other perceived issues.[7]

We consider that there are potential solutions to all of these perceived issues under a regulated non-contestable model. If the main driver for contestability is actually a concern about perceived problems with aspects of the current regulatory framework, a more effective and proportionate solution may be to consider amendments to the current planning framework or to how prescribed transmission services are regulated to ensure timely and efficient delivery of major transmission projects.

There are also risks that contestability could lead to poorer outcomes than regulation. Many stakeholders, including several of those who support contestability, have been critical of the current Victorian transmission contestability arrangements and consider that they result in delays and higher costs compared with the arrangements in the rest of the NEM.

Any review of contestability will therefore need to undertake a thorough review of the potential costs and benefits of a range of potential contestability models within varying contexts. The criteria and principles in this report are intended to assist that process.

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7 HoustonKemp's report for the AER does so at a very high-level, but does not consider whether protections in the current regulatory framework such as the RIT-T process address the innovation and network capex bias that is claimed to exist.

2. Potential contestability models

2.1 POTENTIAL MODELS FOR TRANSMISSION CONTESTABILITY

It is beyond the scope of this report to discuss the range of potential models for transmission contestability. However, it is important to note that there are many potential models of contestability that could be adopted.

The focus of any review of contestability is unlikely to simply be (and should not be) on whether to apply the current Victorian transmission contestability arrangements to the rest of the NEM. Rather a range of potential models should be assessed. The criteria and principles in this report are therefore designed to answer both (1) whether 'increased' contestability in a particular context is in the long term interests of consumers and (2) if so, what model of contestability is likely to best promote the interests of consumers in that context.

As noted in section 1.2, a variety of types of contestability have been adopted for certain transmission services/assets both in Victoria and in the rest of the NEM.

HoustonKemp's report for the AER also proposed three potential high-level models of competition as an alternative to the current NEM and Victorian models. Under these models, the various functions discussed in section 2.2 below were split in different ways between AEMO, the Primary TNSP and the successful tenderer. The 'sponsor' model has the greatest level of contestability, with the successful tenderer responsible for all functions except AEMO identifies needs and there is some form of shared responsibility between the tenderer and Primary TNSP for operation of the network. The 'bid' model would see competition for construction, ownership and operation of solutions chosen by AEMO, similar to the current Victorian transmission model. The 'implement' model would have a similar large role for AEMO but would only have competition for project management and construction, with the Primary TNSP owning and operating the assets once constructed.

The AEMC's 2018 COGATI review final report considered 5 options for the allocation of transmission planning and investment functions between AEMO and TNSPs, with some of the options having increased scope for contestability of investments. The AEMC's recommendations and subsequent work by the ESB led to the current ISP arrangements and allocation of transmission planning and investment functions.

Another option would be a 'Primary Jurisdictional TNSP model' where a jurisdictional body (e.g. VicGrid) coordinates and oversees REZ development plans, leads community engagement and potentially undertakes a contestable procurement process for certain types of strategic investments that have government support. Transmission projects other than certain strategic projects would be subject to the standard AER approval path instead of competitive procurement. If such a model was applied in Victoria, the Primary TNSP could take on some of AEMO's current Victorian functions to simplify planning arrangements and accountabilities.

2.2 THE SUITABILITY OF CONTESTABILITY WILL VARY FOR DIFFERENT TYPES OF FUNCTIONS AND ASSETS

A consistent message from the current Victorian transmission contestability arrangements and previous reports by bodies including the AEMC, ESB and the Houston Kemp report for the AER is that whether contestability is in the long term in interests of consumers is not a binary decision for all electricity

transmission assets and services but should vary according to the context – i.e. across different types of functions/services and assets/projects.

Functions

The current NER provisions on transmission contestability define the permitted scope of contestability by various elements of the transmission service, e.g. functional specification, detailed design, construction, ownership, operation, maintenance.

A similar framework was applied by the AEMC and ESB in developing recommendations for the ISP rules, where the various stages of the investment process were considered and decisions taken on which aspects should be undertaken by AEMO and which should be undertaken by the Primary TNSP. HoustonKemp adapts that framework in its report for the AER, where it assesses models for different levels of contestability where a range of functions are assigned to either AEMO, the primary TNSP or the successful bidder, e.g. identify need, develop candidate options, select preferred solution, early works, procure and build, own and finance, operate.[8]

We recommend that decisions in relation to whether, to what extent, and in what form, transmission contestability should be adopted should be considered against each of the following functions that are involved in the provision of a major transmission project:[9]

1. **Defining the identified need** | Currently undertaken as part of the ISP and/or jurisdictional policies for major transmission projects.

2. **Option selection, including evaluation of non-network options** | Currently partly undertaken by AEMO in the ISP and partly by TNSPs in the RIT-T, plus proposals for state bodies such as VicGrid and the NSW Consumer Trustee to have significant future roles.

3. **Community engagement** | Currently largely undertaken by the Primary TNSP, but with proposals for state bodies such as VicGrid to take a leading role in this area in future.

4. **Functional specifications** | Even for contestable assets, the NER currently requires that the Primary TNSP is responsible for developing functional specifications that the assets must comply with. This includes matters such as technical parameters for the asset's design, construction, operation, maintenance and interface with the shared network. AEMO has a similar role for contestable augmentations in Victoria, where it specifies detailed Primary Functional Requirements and Protection and Control Requirements for each augmentation to the shared network.

5. **Other early works** | In addition to investigating options and developing the functional specification, there are usually benefits in undertaking other early works to facilitate the project.[10]

6. **Detailed design** | Where assets are contestable under the NER, a contestable provider can develop the detailed layout and configuration of the assets to meet the functional specification. In practice, TNSPs also procure detailed design services from contestable providers for major transmission projects that are not contestable.

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8 HoustonKemp, p62.

9 We have used the term 'functions', but 'services' could also be used. We have avoided using 'services' given its current meaning under the NER where many of these functions are currently part of the same prescribed transmission service. Depending on the desired level of contestability, it may be possible to separate out some of these functions and classify various separate prescribed, negotiated or unregulated services.

10 The 'sponsor' model in HoustonKemp's report for the AER appears to combine functions 3 to 6 into 'early works'.

7. **Construction |** In practice, TNSPs contestably tender the construction of all major transmission projects, which account for a high proportion of the costs.

8. **Ownership and financing |** In theory, ownership of a transmission asset can be separated from responsibility for its operation and maintenance. This is currently possible for IUSAs and DNAs, as well as under the Victorian transmission arrangements. However, this separation is relatively rare in practice and could create significant risks for both the Primary TNSP and the contestable asset owner that need require complex contractual arrangements to manage.

9. **Operation and control |** Currently the Primary TNSP is responsible for operation and control of the shared transmission network, including compliance with regulatory requirements regarding system security and reliability. In Victoria, AEMO has primary responsibility and contracts with the relevant DTSOs. Outside of Victoria, only connection assets can be contestably operated.

10. **Maintenance |** We are not aware of any examples where maintenance of transmission assets has been separated from their operation. In the 2017 transmission connections and planning arrangements rule change determination the AEMC considered that there would be little benefit in such a separation but considerable potential risks.

The costs and benefits of contestability are likely to vary significantly across different functions.

In particular, functions 1 to 5 are less likely to be suitable for contestability and there are likely to be better outcomes for consumers (including lower costs, more timely investment and improved community engagement) if they are performed by the Primary TNSP, AEMO or a suitably resourced and skilled jurisdictional body.[11, 12] Our 'contestability policy criteria' and 'scope of contestability principles can be applied to test this view. The contestability policy criteria and the 'form of contestability' principles in section 6 can help determine which of those bodies is best placed to perform those functions.

An assessment of increasing the scope of contestability should therefore focus on functions 6 to 10 above. However, given TNSPs contestably tender the design and construction of all major transmission projects (functions 6 and 7), the opportunities for increasing contestability are likely in practice to focus on functions 8 to 10.

If increased contestability is introduced, then there will also need to be an additional function of undertaking the contestable procurement process. There is also likely to need to be another function of a single entity that is responsible for contracting with all contestable transmission providers and connecting parties, as AEMO does in Victoria.

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[11] The HoustonKemp report for the AER included a 'sponsor' based model of competition where functions 2 to 5 are contestable. In this model, which is based on United States transmission precedents, developers compete to build innovative solutions to needs identified by the independent system planner. HoustonKemp notes that such a model 'would represent a significant departure from the existing framework in the NEM and, as such, would most likely involve a lengthy and complex implementation process' including new legislation in each jurisdiction.

We consider that such a model would involve large implementation costs, a very long implementation period and significant risks to security and reliability. This model would also be inconsistent with fundamental features of the ISP framework, the legislative framework for the NSW Electricity Roadmap and the Victorian government's REZ Development Plan. Given that the focus of this report is on actionable ISP projects or other projects that are developed in accordance with these state policies, this model would not be suitable for those projects. If this model was considered further, our proposed criteria and principles could be applied to it to assess its suitability.

[12] Community engagement and early works (functions 3 and 5) could be potentially undertaken by the competitive provider, but that is likely to have significant downsides. Not commencing work on those activities until after the successful provider is selected is likely to lead to significant delays or risk selecting an option or route that turns out to be less desirable than expected. Allocating responsibility for community engagement to tenderers who may vary for each project and do not have a history of engagement with the local community risks poorer engagement outcomes.

Assets/projects

This report focusses on 'actionable ISP projects' under the ISP and other major transmission projects that are developed under state or territory policies. As a result, the main projects are likely to be REZs, interconnectors or major intra-regional transmission upgrades (e.g. HumeLink). However, some smaller transmission upgrades and system security projects are also likely to be actionable ISP projects and/or funded under state policies.

We have not considered connection assets (which are already contestable under the NER) or the operation, maintenance or replacement of the existing shared network (which is not likely to be suitable to contestability due to the additional costs and risks involved in splitting accountability for those assets).

Even within this limited scope, there will still be benefits in assessing how the appropriate scope of contestability varies for different types of transmission projects or assets. The key consideration is likely to be the extent to which the relevant assets are separable from the existing transmission network so that accountability for them can be separated from accountability for the rest of the network.

This separability test is likely to require different treatment of new assets compared with the ownership, operation, maintenance or replacement of the current network. It is also likely to require a distinction between separable assets that could be contestable and non-contestable 'cut-in works' to connect to the existing network, which is consistent with the current Victorian transmission contestability arrangements and the AEMC's new DNA arrangements.

For example, Ofgem's criteria for competition for onshore electricity transmission projects provide that competition should only apply to assets that are:[13]

- **new**, which means 'a completely new transmission asset or a complete replacement of an existing transmission asset';
- **separable**, which requires the boundaries of ownership between these assets and other assets to be clearly delineated; and
- **high value**, which requires the expected capital expenditure to exceed £100 million.

This separability consideration is included in our 'scope of contestability' principles in section 5.

3. Potential costs and benefits of transmission contestability

3.1 POTENTIAL BENEFITS OF CONTESTABILITY

Stakeholders' views on the potential benefits of contestability are reflected in the problem definition in section 1.3 above.

In many other markets, increased competition in the provision of services has the potential to deliver a range of benefits for consumers including:

- Short term cost reductions though improvements in productive efficiency if contestable providers are able to provide services more efficiently than the incumbent.

[13] Ofgem, *Guidance on the criteria for competition*, 12 February 2019.

- Short term reductions in prices for consumers due to reduced profit margins of suppliers (noting that wealth transfers from suppliers to consumers are not counted as a benefit under the national electricity objective).
- Long term cost reductions through improvements in dynamic efficiency if the competitive process improves efficiency over time, for example by incentivising greater innovation in the types of network or non-network solutions that are adopted and how they are delivered.
- Faster delivery of services due to competition between suppliers, particularly if competition can be used as an alternative to administrative mechanisms that take longer to complete.
- Greater choice and improved service for customers.

Competition will almost always lead to lower prices and better outcomes for consumers than an unregulated monopoly. However, that is not the appropriate comparison when assessing the potential benefits of contestability for transmission services. Instead, the relevant question is whether the potential benefits of competition discussed above will be realised when compared with the counterfactual of regulation as a prescribed transmission service.

There are a range of reasons why these benefits may not be realised for transmission services, or the materiality of benefits may not be sufficient to outweigh the costs, including:

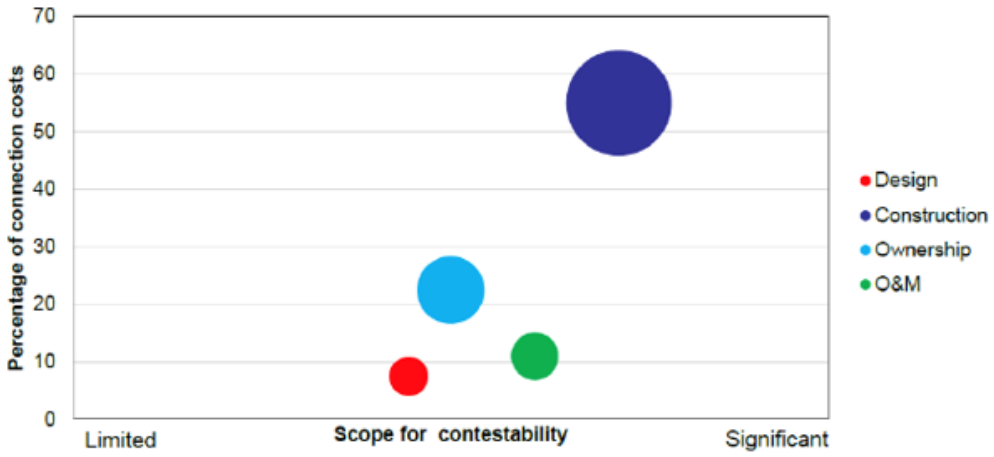
- The revenue that can be earned by TNSPs for prescribed services is regulated by the AER with the outcomes of the regulatory process intended to replicate competitive outcomes. The prices for prescribed transmission services may be lower than prices under contestability due to the AER revenue regulation process, particularly given the AER's current approach to setting the rate of return and how regulated rates of return compare with competitive returns for other electricity investments. There is also a risk that competitive providers may expect a shorter period for the recovery of their capital compared with the current long depreciation periods applied when determining prices for regulated investments. Appendix B discusses these issues in more detail, including considering the potential impact on rates of return from separating ownership from other functions.
- Regulated TNSPs already undertake competitive procurement for several of the functions involved in the provision of transmission services. This includes construction, which as discussed below is the largest element of the costs of major transmission projects. Any cost benefits from contestability for other functions that make up a much smaller percentage of total project costs may not be great enough to outweigh additional costs created by contestability. Given the nature of these functions, there may not be any cost savings from making them contestable, e.g. if they relate to costs such as land acquisition or environmental offset costs that are unlikely to vary under contestability.
- Contestability may not speed up investment processes and the delivery of services compared with regulation (except at the expense of reductions in transparency and consumer engagement, e.g. if existing regulatory processes such as the RIT-T are removed and replaced by a less transparent contestable procurement process). The AER's recent guidance note on the regulation of large transmission projects sought to give TNSPs greater confidence in how the AER will assess the costs of major transmission projects and reduce the risk that the regulatory framework could lead to delays in those projects.[14] As discussed below, experience shows that transmission investments can take materially longer to deliver under the current Victorian contestability arrangements than under the regulated monopoly model in the rest of the NEM. Similarly, the introduction of contestability in electricity metering services initially led to significant increases in meter installation timeframes compared with regulated metering services due to coordination challenges.

14 AER, *Final guidance note – regulation of large transmission projects*, March 2021.

- Other than for connection assets serving an individual generator and funded by that generator, contestability of transmission services is unlikely to result in any changes in service quality or any increase in choice for customers. Shared transmission services will continue to be subject to the same regulated security, reliability, safety and quality requirements. Individual customers cannot choose to have different standards apply to parts of the shared network that supply and are funded by all consumers. Contestability could even result in poorer outcomes for customers of the shared network if contestable providers focus on reducing short term costs rather than longer term asset performance and resilience.

As noted above, TNSPs already undertake contestable procurement for construction of all major transmission projects. In its 2017 Transmission connection and planning arrangements rule change final determination, the AEMC assessed the potential benefits of introducing competition for identified user shared assets and conducted a survey of generators and renewable energy developers. Based on the results shown in Figure 3.1 below, the AEMC concluded that 'construction costs are the most significant contributor to total connection costs, and that there is the greatest scope for them to be provided contestably'.[15]

Figure 3.1: AEMC analysis of the breakdown of costs and scope for contestability



The AEMC reiterated this view in its July 2021 final determination on the Connection to dedicated connection assets rule change, where it stated:[16]

> *The Commission considers the greatest benefits from allowing for competition in the provision of transmission network services are likely to arise during construction, which remains contestable.*

We note that both of these comments by the AEMC were only in the context of transmission investments to facilitate generator connections.

15 AEMC, *Transmission Connections and Planning Arrangements Rule 2017, final determination*, p146-147.

16 AEMC, *Connection to dedicated connection assets rule 2021, final determination*, p v.

In the context of large ISP projects, TransGrid's submission to the ESB's Post 2025 Options Paper similarly states:[17]

> *TransGrid undertakes leading market competitive tender processes for all professional services, construction, equipment and materials provision for these ISP projects. For example on PEC, approximately 80% of the total cost of the project has been procured under a competitive market process. The remainder of the costs are made up of property, environmental and TransGrid internal costs. In the current regulatory framework, the regulator assesses whether the total costs submitted by TransGrid for the project are prudent and efficient.*

This suggests that non-construction costs as a proportion of total cost for major transmission projects may only be in the order of 20%, and the functions that are not currently contestable may not be suitable for contestability or may be of type that means the costs are unlikely to be lower under contestability.

3.2 POTENTIAL COSTS OF CONTESTABILITY

In addition to the potential cost and timing risks noted above, the potential costs of contestability for transmission services include risks of:

- A detrimental impact on security, reliability or safety due to loss of clear singular accountability for the overall transmission system (unless that accountability is allocated to a party such as AEMO in the Victorian model or a Primary TNSP that contracts with all contestable providers).
- Depending on the size and risks of a transmission project and the type of contestability model selected, the costs for bidders of participating in a competitive process might be substantial. In other infrastructure sectors, bid costs can be so substantial that the sponsor government may subsidise bid costs to attract quality bidders.[18]
- A potential impact on the effectiveness of consultation with consumers, local communities and other stakeholders due to this loss of clear singular accountability through the planning process.
- Inefficient incentives, for example:
  - Will a contestable provider who is only responsible just certain parts of the network have incentives to minimise the costs of those network elements at the expense of total system costs or long term security and reliability?
  - Will a not-for-profit planner separated from underlying asset ownership have more limited incentives to deliver investment that meets the needs of connecting parties compared with an asset owner that is exposed to financial rewards and penalties?
- Implementation costs, including the potential need for significant reforms to the rules to allocate responsibility for security and reliability issues. This risk is discussed by the AEMC in its previous reviews – see Appendix A. The introduction of contestability in other parts of the energy sector such as retail electricity and electricity metering outside of Victoria involved significant implementation costs, extensive changes to the regulatory regime and lengthy implementation periods.
- Coordination challenges, which could lead to increased costs, delays or poorer service outcomes. The introduction of competition for electricity metering services outside Victoria shows the challenges that can arise coordinating the various regulated and unregulated services that are required to provide an

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17 TransGrid, *Submission to the Energy Security Board's post 2025 market design options paper*, 9 June 2021, pp4-5.

18 Victoria's Bid Cost Reimbursement policy sets out the criteria when partial bid cost reimbursement may be considered for on Public Private Partnerships, Alliances and High Value High Risk Projects as identified by Victoria's High Value High Risk Projects framework. See https://www.dtf.vic.gov.au/infrastructure-investment/bid-cost-reimbursement-major-construction-projects.

end-to-end service to consumers and the importance of clear rules and responsibilities and coordination arrangements.

- The loss of economies of scale and scope. The benefits of economies of scale and scope were a reason why the AEMC recently decided in its draft determination on the Efficient Management of system strength on the power system rule change to move from the current contestable model for the provision of system strength to a regulated model where system strength services are provided by TNSPs as a prescribed transmission service.

AusNet Services notes that the current Victorian transmission contestability arrangements and division of functions between AEMO as independent planner and DTSOs as asset owners create a range of difficulties for the performance of the Victorian transmission system, including:

- **Coordination between the planning and operation of the network**: Planning decisions can affect efficient network operation. A planner separated from underlying asset ownership may be insensitive to the potential financial rewards and penalties that the asset owner is under to maximise service to customers, and matters of technical detail in asset augmentations directed by the planner may adversely impact assets already managed by the owner.
- **Contractual complexity:** The relationship between planning and operation of the network must be handled through a Network Services Agreement between the two parties, rather than through intra-firm processes. The split between the planner's responsibility for new connections and the DTSOs' ownership of network assets means connection applicants face greater complexity and are required to negotiate and conclude a larger number of agreements than in other states.
- **Duplication of processes:** There are duplicated decisions and processes across the planner and DTSOs, as well as for connecting parties. This increases cost and the time to progress connection applications.
- **Ability to manage risk:** An independent planner that is established as a not-for-profit entity will have little capacity to assume financial risk. Given this, it can assume only minimal liability under agreements and must pass contractual risks to asset owners or connecting parties. This position is perceived as a risk by investors and financiers and there is a strong market perception that these arrangements delay, and in some cases defer, new connections to the Victorian transmission network.

AusNet Services also noted in its submission to the AEMC's recent system strength rule change draft determination that 'AusNet's experience is that this functional split in the Victorian framework can contribute to delays, costs and complexity in relation to some transmission activity'.[19]

The Clean Energy Council made similar comments in its submission on the Victorian REZ Development Plan Directions Paper, where it stated:[20]

> *The arrangements in Victoria create a complicated environment for connecting generators as they are required to negotiate and execute multiple arrangements with AEMO (given its responsibility for new generation connections) and AusNet (given its ownership of shared network assets) in order to connect. This results in greater costs and delays in the connection process in Victoria compared with the other NEM jurisdictions...*
>
> *The CEC recommends that Victorian transmission planning and connection arrangements should be transferred from AEMO to AusNet. AEMO should, however, retain its national*

[19] AusNet Services, Submission – Draft Determination: Efficient Management of system strength on the power system, 17 June 2021, pp2 and 6-7.

[20] Clean Energy Council, *submission to Victorian Renewable Energy Zones Development Plan – Directions Paper*, 31 March 2021, pp6-7.

planning responsibilities. A single point of accountability with respect to the planning of the network is essential for the efficient design of the network and avoiding unintended reliability and security concerns due to reduced complexity. This will also bring the Victorian arrangements into alignment with the other NEM jurisdictions. As AusNet is the owner of the shared network assets and has commercial drivers, this should also help deliver more timely delivery of REZ infrastructure and generator connections.

The AEMC has also made comments about the contractual complexity of the Victorian arrangements in its previous decisions. In its 2017 transmission connections and planning arrangements rule final determination, the AEMC noted that in jurisdictions other than Victoria only one connection agreement is likely to be required (i.e. between the connection applicant and the TNSP) but the split in functions in Victoria means that more contracts are required and there are more parties to the contract.[21] The AEMC referred to contractual structure diagrams from AEMO's website that show that at least 6 contracts are often required for contestable connections, and we understand that in practice even more contracts are sometimes required.

Many of the above challenges arising from a split of accountabilities between an independent body responsible for certain planning and procurement matters and contestable transmission asset owners and operators could also exist under the new arrangements that are currently being implemented in NSW. Under those arrangements, the Energy Corporation of NSW and the Consumer Trustee will both have various functions related to the planning and procurement of transmission investments to deliver the NSW Infrastructure Roadmap.

4. Overarching criteria for contestability policy decisions

4.1 APPROACH TO DEVELOPING CRITERIA AND PRINCIPLES

We have developed criteria and principles to guide proposals to increase contestability and inform decision making and submissions for any reviews of contestability:

- **Overarching contestability policy criteria**: Overarching criteria to be applied when assessing whether contestability of electricity transmission services is likely to promote the long term interests of electricity consumers and, if so, what model of contestability is most appropriate – set out in this section 4.
- **More detailed principles to inform decisions on the scope and form of contestability**: These principles elaborate on the above criteria where necessary. These principles should be applied:
  - When deciding which specific electricity transmission services or projects should be subject to contestability. These 'scope of contestability principles' are set out in section 5.
  - When developing the arrangements for contestability and assessing various potential models of contestability so that contestability promotes the long term interests of electricity consumers. These 'form of contestability principles' are set out in section 6.

In the executive summary, we have combined these criteria and principles into a single list with the 6 criteria and the relevant principles that elaborate on the application of each criterion. To create this single combined list, we merged some of the 'form' and 'scope' principles where they related to similar issues.

[21] Transmission connections and planning arrangements rule final determination, pp78.79.

The important high-level considerations are set out in the criteria, and for some purposes the criteria may be all that is needed. The principles contain more detail to help decision makers understand and apply the criteria. We consider that the more detailed principles can act as a useful check-list for decision makers.

Our principles and criteria have been developed having regard to:

- the national electricity objective;
- the problem definition and views of key stakeholders set out in section 1.3;
- previous reports on contestability of transmission and other energy services by the AEMC, ESB, AER, HoustonKemp and other bodies;
- experience of contestability in transmission and other energy services, including the current Victorian transmission contestability arrangements, contestability of transmission connections and contestability for other energy services such as metering outside of Victoria and retail electricity.

4.2 CONTESTABILITY POLICY CRITERIA

Our overarching criteria for guiding contestability policy decisions are:

- **Clear accountability |** Provide for clear accountabilities, including accountability for maintaining the security, reliability and safety of the overall transmission system and its various elements.
- **Cost |** Minimise the cost to consumers, based on long term total system costs.
- **Timeliness |** Facilitate timely transmission investment and connections processes.
- **Transparency |** Promote transparency and consumer and local community engagement in investment decision making.
- **Incentives and risk allocation |** Create incentives for efficient behaviour, innovation in network and non-network solutions and efficient allocation of risks, including aligning risks and rewards so that parties are appropriately remunerated for the risks they bear.
- **Regulatory predictability |** Regulatory arrangements should take account of the long-lived nature of major transmission investments and give investors, transmission businesses, market participants and consumers confidence in how those assets will be regulated over their life. This means any changes to regulatory arrangements should be predictable, subject to consultation and mindful of their potential their impact on current and future investments.

5. Scope of contestability principles

The 'scope of contestability' principles set out in this section would be applied alongside the criteria above, as shown in the executive summary. They provide more detailed principles that policy makers should have regard to when deciding whether contestability of electricity transmission services is likely to promote the long term interests of electricity consumers and which specific functions, services or projects should be subject to contestability.

These principles should be applied to the various functions and assets discussed in section 2.2 as the costs and benefits of contestability will vary according to the context for different functions and assets. Consistent with the scope of this report, these principles have been designed to apply to actionable ISP projects under the ISP or REZs and other major transmission projects that are developed under state or territory renewable energy policies.

Clear accountability:

- **Overall accountability for security, reliability and safety |** To deliver service outcomes that benefit consumers, there must be clear accountability for the overall security, reliability and safety of the interconnected transmission network. The relative costs and benefits of contestability and regulation should be assessed in terms of the extent to which they deliver clear accountability for these matters. Contestability should focus on those functions or projects that can be provided by separate parties while preserving clear accountability for the overall transmission network.
- **Separability |** To deliver clear accountability, the appropriateness of contestability for specific assets will depend on the extent to which they are separable from the remainder of the shared transmission system, i.e. the extent to which accountability for them can be clearly separated without creating disproportionate costs and risks for transmission providers and users of the rest of the network. An assessment of separability should consider the potential future development of the network and not just the current design given AEMO's forecasts that significant network augmentation will be required over the coming years to connect renewables and meet increased demand from electrification of transport and other sectors.

Cost:

- **Clear identification of problem definition and comparison of competition vs regulation** | Any assessment of contestability should start with a clear identification of the problems that are sought to be addressed in terms of the long term interests of electricity consumers. The potential costs and benefits of competition in relation to each of those problems should be compared with the costs and benefits of a regulated service, including the protections of AER revenue regulation, the RIT-T and other regulatory measures could be implemented to address the perceived problems. This assessment should consider total system costs and overall outcomes for consumers, not just transmission costs. It should be a long term assessment covering the entire lifecycle of the relevant assets.
- **Materiality of benefits |** Contestability should focus on those services or assets where there is significant scope for competition and cost savings and where those potential savings are large enough to justify the costs of implementing contestability and any adverse impact on other principles.
- **Depth of the market |** An assessment of the potential costs and benefits of contestability should consider the likely level of competition for the relevant functions and projects, including the potential for barriers to entry. Contestability should focus on those functions and projects where there are likely to be lower barriers to entry and a higher prospect that competition will lead to lower costs. This assessment may vary by jurisdiction, noting that all electricity transmission services require specialist skills and are likely to have relatively high barriers to entry.

Timeliness:

- **Impact on investment timeframes |** Contestability should not lead to the risk of disproportionate delays in investment or connection processes that would increase total system costs for consumers or adversely affect reliability, security or safety.
- **Avoiding unnecessary complexity and coordination challenges |** Minimising costs and delays while maintaining security, reliability and safety for consumers requires coordination between the respective parties. Contestability should focus on those services or assets where coordination challenges between multiple parties can be more easily avoided or resolved. Unnecessary complexity should be avoided.

Transparency:

- **Transparency and engagement |** Contestability should not result in a reduction in opportunities for consumer and local community engagement in investment decisions or the transparency of those

decisions and the resulting cost impacts on consumers. Any increase in contestability should result in at least the same level of transparency and opportunities for engagement as are currently provided by the RIT-T and AER revenue determination processes.

Incentives and risk allocation:

- **Incentives |** Contestability decisions should recognise the relevant parties' incentives and ability to manage risk. A contestable provider who is only responsible for certain parts of the network may have incentives to minimise the costs of those network elements at the expense of matters such as total system costs, long term security and reliability or community engagement on route selection. For-profit TNSPs with financial incentives and the ability to take on certain risks may be more likely to make timely connection and investment decisions than non-profit government bodies that cannot take on risk. Conversely, TNSPs may have greater incentives to favour network solutions over non-network options, to the extent this risk cannot be readily mitigated by the RIT-T or other regulatory tools.

6. Form of contestability principles

The 'form of contestability' principles set out in this section would be applied alongside the criteria in section 4.2 , as shown in the executive summary. They elaborate on principles to apply when developing the arrangements for contestability and assessing various potential models of contestability so that contestability promotes the long term interests of electricity consumers.

Clear accountability:

- **Single overall accountability |** There should be a single body with overall accountability for the security, reliability and safety of the transmission network in the relevant area/jurisdiction and the ability to provide an end-to-end transmission service to connecting parties. If contestability is introduced, maintaining overall accountability is likely to require a single party that contracts with all contestable transmission providers, which would require complex contractual arrangements that are likely to require appropriate regulatory oversight and a clear allocation of accountabilities.
- **Clear allocation of responsibilities |** There should be clear delineation between those functions or assets that are not subject to contestability and those that are contestable. To ensure service outcomes to consumers are not adversely affected, there should be a clear allocation of accountability for all relevant regulatory obligations for all of the relevant functions and assets.
- **Level playing field |** All providers of transmission services should be subject to the same national and jurisdictional licensing and registration requirements and other appropriate regulatory obligations to protect security, reliability, safety and other relevant matters (e.g. investment approvals and cyber security).
- **Allocation of roles |** The allocation of roles should allocate risks to those who can best manage them, recognise the incentives of the relevant parties, and be supported by appropriate governance and resourcing of the relevant parties.

Cost:

- **Competition in related markets |** Increased competition for transmission services should not come at the expense of competition in other markets (where that competition benefits consumers). Appropriate ring-fencing rules should prevent generators providing transmission services where there is a risk of them favouring themselves. Ring-fencing rules should not unduly restrict the ability of TNSPs or their related businesses to compete for contestable transmission services.

Timeliness:

- **Timeliness of investment processes |** Any new arrangements should not lead to delays in investment or connection processes. If additional processes are required due to contestability, existing steps may need to be removed so overall timeframes are not extended (without reducing accountability, transparency or engagement).

Transparency:

- **Consumer and community engagement |** There should be adequate opportunities for community and consumer engagement in investment decisions, route selection and cost recovery. There should be clarity for local communities and consumer groups as to who they engage with on these matters, preferably though a single entity who is accountable for them.
- **Transparency of investment decision making |** Investment decisions should be made on a transparent basis by an appropriately qualified and resourced independent body applying tests based on the long term interest of electricity consumers.
- **Transparency of regulation and cost recovery |** There is a clear framework for how monopoly prescribed transmission services are regulated and how the costs are recovered. There should be similar clarity and transparency regarding how any contestably provided services will be regulated and how the costs will be recovered.

Incentives and risk allocation:

- **Aligning risks and rewards |** Risks and rewards should be aligned so that parties are appropriately remunerated for the risks they bear. If the functions related to providing transmission services are separated and some roles are made contestable, the impact of this separation on the appropriate returns for services that remain regulated needs to be considered, e.g. increased risks associated with requiring the Primary TNSP to operate and maintain assets that are designed and constructed by other parties.[22]
- **Flexibility |** While maintaining clear accountability, the arrangements should be sufficiently flexible and not overly prescriptive so that they can apply in a range of circumstances and jurisdictions.
- **Subsidiarity and local knowledge |** Issues should be dealt with at the most local level that is consistent with their resolution. Functions requiring detailed knowledge of the network should be allocated to the Primary TNSP. Functions requiring community engagement or knowledge of local generation and consumption needs should be allocated to the Primary TNSP or an appropriately resourced jurisdictional body rather than a national body.

[22] The requirement in the National Electricity Law that the rate of return instrument must specify a single rate of return that applies to all regulated network service providers (section 18J) may limit the AER's ability to give effect to this principle and ensure that the impact of increased risks from contestability are taken into account when setting the efficient return for the Primary TNSPs.

Appendix A Previous reviews of transmission contestability

A.1 AEMC TRANSMISSION CONNECTION AND PLANNING ARRANGEMENTS RULE CHANGE

Most of the current NER transmission contestability arrangements outside of Victoria were introduced by the AEMC in the Transmission Connections and Planning Arrangements Rule 2017.[23] This rule change followed extensive consideration and consultation on the issue as part of the Transmission Frameworks Review from 2010-2013.

The new rules clarified the level of contestability for various functions and assets related to connections. The AEMC clarified that all functions related to connection assets are contestable. It also determined that certain defined functions related to new shared transmission assets required to facilitate a connection (IUSAs) could be contestable, including detailed design, construction and ownership.

However, the AEMC determined that only the Primary TNSP could be responsible for the operation, maintenance and control of the shared network (including IUSAs) due to the need to maintain clear, singular accountability for the operation of the shared network and maintain the safe, reliable and secure supply of electricity across the shared network.

The AEMC stated that contestability for operation of the shared network would mean that 'the entirety of the current regulatory framework would need to be reviewed to consider whether the abovementioned outcome – a safe, reliable and secure shared transmission network – could still be achieved. Inevitably, given the current framework was not designed to accommodate multiple parties being accountable for a single shared transmission system, there would be regulatory gaps that would need to be addressed.' The AEMC considered that these gaps would include:

- TNSPs' obligations under chapters 4 and 5 of the NER regarding power system security, planning and connections
- the planning, design and operating standards set out in the schedules to chapter 5 of the NER
- planning obligations imposed on incumbent TNSPs assume that the TNSP is responsible for all parts of its network
- jurisdictional reliability standards.

The AEMC noted that these issues are addressed in the Victorian arrangements by allocating overall responsibility for the shared network to AEMO, who then contracts with all DTSOs and connecting parties.

The AEMC considered whether these issues could be managed through contracts, but:

> *The Commission considered that allowing parties to allocate accountability through contracts would create regulatory uncertainty and possibly leave regulatory gaps, which it considered unacceptable in the context of the safety, security and reliability of electricity supply to consumers. If this accountability were to be set out explicitly in the NER, rather*

[23] The focus of this rule change was on the connections process and new transmission assets required for connections, including new shared network assets. It did not consider other transmission assets such as interconnectors. Some of the new arrangements introduced in this rule change were subsequently amended in the 2021 DCA rule change discussed below, which reduced the level of contestability for DCAs compared with the 2017 rules.

than through contracts, the rules would necessarily need to be quite prescriptive in order to have a clear, predictable and transparent connections framework. However, while the Commission has the power to amend the NER, it does not have the ability to force changes to the NEL or state-based regulatory instruments that may need to be amended to support such an approach.

As discussed in section 3.1, the AEMC undertook a survey of connecting parties to assess the relative costs and potential benefits of contestability of various aspects of transmission services related to connections and concluded that 'construction costs are the most significant contributor to total connection costs, and that there is the greatest scope for this service to be provided contestably.'[24]

A.2 AEMC 2018 COGATI REVIEW

The AEMC's 2018 Coordination of Transmission and Investment review assessed 5 options for the allocation of transmission planning and investment functions between AEMO and TNSPs. The AEMC's recommendations together with subsequent work by the ESB led to the current ISP arrangements and allocation of transmission planning and investment functions outside of Victoria.

As shown in the diagram below, some of the options considered by the AEMC had increased scope for contestability of investments and several stakeholders advocated for increased contestability. Two of the options also had the power for AEMO to direct a TNSP to undertake investments, which was partly included as a means for addressing the risk that a TNSP may decide not to invest in a project that is included in the ISP and passes a RIT-T.

Figure A.1: COGATI options for transmission investment and planning

	STAGE IN INVESTMENT PROCESS	RESPONSIBILITY UNDER EACH OPTION				
		1. TNSPs must consider ISP-identified needs in their TAPRs	**2. TNSPs must conduct RIT-T on ISP-identified needs and options**	**3: AEMO determines "best" option**	**4: AEMO directs TNSP to proceed with the "best" option**	**5: AEMO directs TNSP to implement the investment**
1	**Identify need**	AEMO	AEMO	AEMO	AEMO	AEMO
2	**Identify credible options that address the need**	TNSP	AEMO	AEMO	AEMO	AEMO
3	**Assess costs and benefits of credible options**	TNSP	TNSP	AEMO	AEMO	AEMO
4	**Determine "best" option**	TNSP	TNSP	AEMO	AEMO	AEMO
5	**Make decision to implement "best" option**	TNSP	TNSP	TNSP	AEMO directs TNSP to do so	AEMO
6	**Undertake detailed costing and planning for the investment**	TNSP	TNSP	TNSP	TNSP	AEMO
7	**Implement the investment**	TNSP	TNSP	TNSP	TNSP	AEMO directs TNSP to do so
TNSP control over investment		Higher degree of control				Lower degree of control

In response to proposals to increase contestability, the Commission stated:[25]

Introducing broader contestability would blur the incumbent TNSP's accountability for the operation of the shared network, potentially affecting end-user consumers. Given the criticality of system safety, reliability and security, accountability for outcomes on the

[24] AEMC, *Transmission Connections and Planning Arrangements Rule 2017, final determination*, p147.

[25] AEMC, *Coordination of Generation and Transmission Investment, Final Report*, 21 December 2018, p34.

shared transmission network should be clearly defined - clear, singular accountability means that there is no question as to who:

- *is ultimately responsible for the safety, reliability and security of the shared transmission network, including who is responsible for resolving any issues*
- *to contact in the event that there is an issue identified with certain assets, including who AEMO should direct if it needs to do so to support power system security*
- *is responsible for mitigating particular risks, for example, performance risks and any incentives or penalties that are applied through regulation or contracts.*

The Commission determined a power to direct investments would not be in the long term interests of consumers 'as it would decrease capital and operational efficiency by further separating transmission system planning from ownership and operations' and 'would be inconsistent with the incentive based regulation framework and increase the risk that consumers would be required to pay for inefficient investments'.[26]

A.3 AEMC DEDICATED CONNECTION ASSETS RULE CHANGE

The AEMC recently amended some aspects of the rules from the Transmission Connections and Planning Arrangements Rule 2017 in its 8 July 2021 rule change determination on dedicated connection assets (DCAs).[27]

The AEMC replaced the concept of DCAs with the new category of Designated Network Assets (DNAs) to address a range of issues that arise if multiple parties connect to a DCA/DNA (i.e. if those assets act like a type of REZ). It determined that DNAs should be treated as part of the 'transmission network' rather than as 'connection assets' and that only the Primary TNSP can develop the functional specification, operate and maintain DNAs. However, the detailed design, construction and ownership of DNAs is contestable, similar to the contestability arrangements for IUSAs.[28]

The AEMC noted that this resulted in a reduction in contestability, but considered this change was necessary as it 'provides a single point of accountability for power system security and ensures the Primary TNSP has visibility of all material additions to the network for planning and operation purposes.'

The AEMC stated that it 'considers the greatest benefits from allowing for competition in the provision of transmission network services are likely to arise during construction, which remains contestable.'[29]

This split between contestable and non-contestable functions for DNAs requires the Primary TNSP and the DNA owner to negotiate a Network Operating Agreement, including charges and contractual terms for the Primary TNSP to provide the functional specifications, operation and maintenance of the DNA as negotiated transmission services.

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26 AEMC 2018 COGATI final report, p32.

27 Connection to dedicated connection assets Rule 2021.

28 The main difference between DNAs and 'shared' transmission network assets including IUSAs is that DNAs are subject to a more limited access regime rather than the open access regime that applies to the shared transmission network.

29 AEMC, *Transmission Connections and Planning Arrangements Rule 2017, final determination*, p v.

A.4 AER REVIEW OF LARGE TRANSMISSION PROJECTS AND HOUSTONKEMP REPORT FOR THE AER

In 2020-21, the AER undertook a review of large transmission projects. The scope of this review was initially very broad, although the scope was later reduced when the AEMC announced it would undertake its own transmission review.

In its letter commencing the review, the AER stated that the scope included 'exploring whether there are opportunities to amend the regulatory framework to further improve the assessment or delivery of these projects in the medium to longer term, such as improving the assessment process for actionable ISP projects and increasing competitive tension in the procurement and delivery of actionable ISP projects'.[30]

To inform the review, the AER commissioned Houston Kemp to provide a report.[31]

The AER noted 'Introducing more competition through sponsor-based competitive tendering, as outlined in HoustonKemp's report... could deliver greater productive efficiencies through more innovative solutions, and reduce the need for regulatory assessment of expenditure forecasts. This would be a substantial reform that may be costly and time consuming to implement, and we are cognisant of the many other reforms underway'.

The Houston Kemp report considered the potential benefits of increased transmission contestability and various potential models for contestability. HoustonKemp considered that '[o]ne of the key benefits to the introduction of competition is the additional rigour that this provides in seeking innovative solutions, a process that is difficult to incentivise by administrative means'. HoustonKemp considered that:

> *TNSP-led solution selection and implementation gives rise to the risk that the preferred solution is not the most optimal, because of the intrinsic preference of TNSPs for network-focused as distinct from non-network options. There are two potential causes of this risk:*
>
> - *TNSPs have an institutional preference for network solutions over non-network solutions, since their essential reason for being is to own and operate the transmission network; and*
> - *the essential structure of the regulatory arrangements for the remuneration of transmission, and particularly its focus on profit-based compensation for additional capex but not opex, is likely to encourage TNSPs to give preference to capex over opex focused solutions – we refer to this as an intrinsic, capital expenditure preference.*

Houston Kemp concluded that the extent to which competitive procurement can assist in the delivery of large transmission investments depends on:

- *the extent to which potential gains from innovation are available, which is also linked to the degree of information asymmetry between the TNSP and the service provider;*
- *the extent to which existing decision-makers (such as the TNSP and AEMO) are capable of innovation that would achieve efficient outcomes over the long run, or whether these bodies can be presumed to be risk averse and so prefer more conventional means of meeting power system needs; and*

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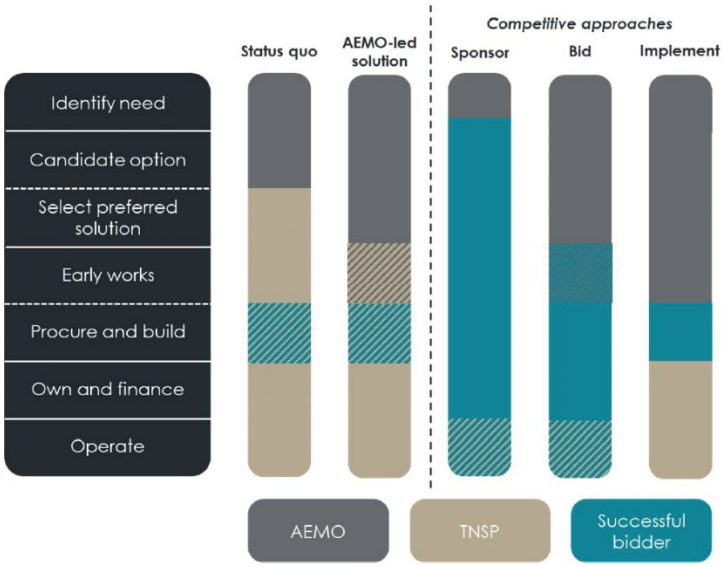
30 AER, *letter to stakeholders 'Re: AER work program to support efficient delivery of actionable ISP projects – stakeholder views sought'*, 17 November 2020.

31 Houston Kemp, *Regulatory treatment of large, discrete transmission investments*, 19 August 2020.

- *the extent to which there is the prospect of a workable degree of competition that would allow functions requiring innovation to be sourced externally, which turns on:*
  - *the economies of scale and scope available to the incumbent;*
  - *the degree of investment separability from the incumbent's network;*
  - *the extent of cooperation required from the incumbent; and*
  - *whether there is a sufficient scale of investment to encourage wide participation.*

HoustonKemp considered three potential models for contestability, which are summarised below.

Figure A.2: HoustonKemp models for transmission competition



The AER ultimately did not make any recommendations on contestability and decided not to progress this part of its review on the basis that the AEMC intended to undertake a review of transmission investment.

A.5 ESB POST 2025 MARKET DESIGN OPTION PAPER

In April 2021, the ESB published an options paper for its Post 2025 Market Design project.

This paper proposed that increased contestability of transmission projects may have benefits. However, it only considered this issue very briefly and did not give details of what problem contestability was seeking to resolve or what costs and benefits may arise from contestability. The only relevant comments were:[32]

> *Challenges are emerging in getting the new transmission projects built, and the costs of investing too late can be substantial. The current regulatory test may not capture wider economic benefits that could be captured in a broader cost-benefit test for actionable ISP projects and additional funding options such as contestability may also need to be considered to deliver these projects at least-cost.*

[32] Energy Security Board, *Post 2025 Market Design Options – A paper for consultation*, 30 April 2021, pp 11 and 75.

...

Recent actionable ISP Projects have seen a significant increase in costs (QNI, Project EnergyConnect) and additional funding options such as contestability may also need to be considered to deliver these projects at least-cost.

Appendix B Potential impact of contestability on rates of return

Contestability for ownership of asset(s) involves a range of different decisions that can be made by prospective owners. A key ownership decision is financing, which we discuss in this Appendix.

Determining the rate of return as part of financing decision is controversial for a number of reasons:

- it is material in determining costs and prices;
- the efficient cost of capital (i.e. the most favourable rate of return for capital that debt and equity suppliers are willing to offer) is not easily observable;
- rates of return that capital suppliers require are dynamic – they change through time for various reasons;
- there are many choices about how to structure rates of return for long-lived assets (e.g. choice of debt, equity and other mezzanine instruments; tenor for resets; treatment of inflation; tax; depreciation periods, etc);
- as noted above, the Primary TNSP currently cannot be directed to undertake an investment if they consider returns are inadequate (the 'investment holdup' problem).

Potential advantages from increasing contestability for ownership which may lead to more favourable financing outcomes include:

- **Two stage process |** Contestability could be implemented by way of a two stage process involving: first, identification of needs and initial market testing of options; followed by a decision on whether or not to proceed with a second stage, being a formal competitive process for awarding ownership.
- **Objectivity |** If there is a competitive process it could:
  - be an objective way of determining the most favourable cost of capital for the long term interests of consumers;
  - avoid the difficulties and controversy associated with setting a regulated return;
  - address the 'investment holdup' problem.
- **Better information |** Contestability through market testing and, if implemented a competitive process for ownership could provide better information to inform setting of regulated rates of return that are appropriate for the risks involved in the specific investment. In contrast, the AER is currently required by the NEL to set a single regulated rate of return that applies to all regulated services provided by all regulated electricity network service providers.
- **Flexibility and innovation |** Contestability could enable financing to be detached from the AER Rate of Return instrument. This could provide greater flexibility and allow for innovation in determining the structure of rate of return, and take advantage of market opportunities in a way that could best balance the needs of capital suppliers with the interests of customers (as compared to the counterfactual of applying the inflexible AER Rate of Return instrument).

Disadvantages from increasing contestability for ownership to be considered include:

- **Process credibility |** It may be difficult to design a contestable process that attracts genuine competitive interest given barriers to entry including the actual and perceived advantages of incumbent TNSPs.

- **Costs of the competitive tender process |** The costs for administering a competitive process and the costs for potential competitors to participate in competitive process are likely to be significant. There may be a need for example to subsidise competitive bids as occurs in other major competitive infrastructure.
- **Costs arising from separating ownership from operation and maintenance |** The separation of these traditionally integrated functions could also result in additional costs. Under the current regulated model, O&M opex is essentially recovered as a pass through by TNSPs with no profit margin. Where O&M is unbundled from ownership and provided by TNSPs as a negotiated service as in the AEMC's rules for contestable ownership of IUSAs and DCAs, it is reasonable to expect that O&M charges will include an appropriate profit margin including a risk allowance due to the increased complexity and administrative costs as well as the additional risks of operating and maintaining assets that are owned, designed and constructed by another party not under the oversight of the TNSP.
- **Delay |** Undertaking a full competitive process would take longer than a non-competitive process.
- **Complexity |** A competitive tender process that resulted in a separation of ownership from other functions could add considerable complexity as it would need:
  - coordination with other key decisions (eg technical specification, route selection etc)
  - development, implementation and administration of complex new contractual structures and allocation and pricing of a range of risks.
- **Implementation risk |** implementation would require a high level of skills and capabilities within the relevant government entity (such as AEMO or a state entity) and as a result there could be a significant risk of implementation failures.

There is very little publicly available information on the relative rates of return for comparable contestable and regulated investments. As noted above, rates of return will also vary over time, making comparisons challenging. Recognising these limitations, we note that:

- The current AER rate of return in recent determinations averages around 3.9% on a post-tax nominal vanilla basis, which is equivalent to around 2.2% on a pre-tax real basis. In comparison, we note that:
- AEMO proposes to use a central discount rate of 5.5% (pre-tax real) for its 2022 ISP, and undertake sensitivity testing against a lower bound of 2.0%, an upper bound of 7.5% and an additional sensitivity of 10%. AEMO's estimates were based on a report by Synergies Economic Consulting, with relevant inputs based on publicly available data regarding comparable energy businesses in Australia and overseas.[33] As required by the AER's CBA Guideline, the central discount rate and upper bound are based on an assessment of the rate of return required for 'private investment in the electricity sector in the NEM'. The lower bound is based on an average of recent AER decisions for regulated transmission businesses. This indicates that the expected return for commercial investment in the electricity sector is significantly higher than the current regulated WACC (noting that this will be at least partly due to regulated transmission investments having a lower risk profile than commercial investments in other electricity assets including electricity generation).
- In its submission to the Victorian REZ Development Plan Directions Paper, the Clean Energy Council states:[34]

> *Whilst generators are not opposed to funding network developments, we caution that this will not necessarily result in lower cost outcomes to consumers. A generator's internal rate*

[33] AEMO, *2021 Inputs, Assumptions and Scenarios Report,* 30 July 2021, p103. Synergies Economic Consulting, *Discount rates for use in cost benefit analysis of AEMO's 2022 Integrated System Plan*, July 2021.

[34] Clean Energy Council, *submission to Victorian Renewable Energy Zones Development Plan – Directions Paper*, 31 March 2021, p4.

of return will be higher than a network service provider's (NSP's) regulated weighted average cost of capital. As such, any generator funding of network developments will likely flow through to higher wholesale electricity prices. Given this, where a RIT-T can be satisfied or a positive net benefits test is achieved for potential NEVA projects, the preferred approach should be for the network project to form part of the NSP's regulated asset basis [sic].

- In its submission to the ESB's Post 2025 Options Paper, Spark Infrastructure notes that the offshore transmission regime in the UK illustrates that contestable procurement models can result in significantly higher costs to consumers than under the AER's current regulatory settings. Spark notes that in the 2014 offshore transmission procurement process, tenderers' rates of return on equity were around 10% (post-tax nominal), which compares with the AER's average regulated return on equity of around 4.5% to 5.7% (post-tax nominal). Spark also notes that the UK offshore transmission regime also allows contestable providers to recover their costs over 20 years, as opposed to 40+ years under AER regulation.[35] We note that offshore transmission in the UK market may have a different risk profile to actionable ISP projects or REZs in Australia.

A full assessment of the balance of advantage and disadvantages of increasing contestability for ownership is complex and beyond the scope of this report. However, we make some observations below.

First the balance of advantage and disadvantage would be critically determined by the size and sign of any difference between rates of return that could be achieved, at a point in time, through a successful competitive process and the returns determined through application of the AER rate of return instrument. There is no reason to think this will be stable through time, but rather will change reflecting dynamic changes in capital markets.

Second the AEMC survey in the context of connections showed that ownership was the second most important area of perceived benefit from contestability after construction costs. However, it is not clear how applicable this finding is when applied to the much larger ISP projects, which in principle - given their size - could be attractive for a broader range of investors.

On balance we suspect that in the current environment that government policy makers may conclude the disadvantages would outweigh the advantages, given the priority on objectives for:

- timely roll out of large volumes of transmission infrastructure to support integration of renewables and effectively manage the expected closure of thermal plant; and
- effective management of community and social licence considerations.

It is possible though that in future priorities could change (for example if investment holdup is seen as a bigger problem) and increased ownership contestability could perhaps be considered at that time.

35 Spark Infrastructure, *Response to Consultation on Post 2025 Market Design,* 9 June 2021, p3.