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Thursday, 14 July 2022

Ms Anna Collyer
Chair Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2001

Submitted online: www.aemc.gov.au

Dear Ms Collyer

Transmission Planning and Investment Review- Stage 2 - EPR0087

Thank you for the opportunity to respond to the Commission's draft report on Stage 2 of its Transmission Planning and Investment Review. While a more detailed submission and consultant report is attached, I thought a summary of some key issues might assist.

Significant capital is required to construct the transmission networks required to meet the needs of householders and businesses as we transition to a net zero economy. The regulatory framework has an important role in facilitating the urgent delivery of this investment by providing revenue streams that maintain the benchmark BBB+ credit rating, consistent with the current regulatory approach. We welcome the Commission's conclusion that change to the regulatory framework is required to achieve this outcome by addressing financeability risks. We also agree with the Commission's focus on the long term interests of consumers when addressing this issue.

Our preference is to resolve the regulatory approach to financeability as soon as possible, rather than delaying a resolution until the AER finalises its guidelines. Our primary concern is that the time needed to resolve these guidelines has the potential to delay the attraction of large scale transmission investment. In proposing an early resolution of this issue, we are particularly conscious of the financeability challenges relating to Project EnergyConnect and the likelihood that negative investor sentiment will persist until new arrangements are settled.

We therefore suggest an alternative approach, which is to codify the regulator's approach to financeability in the Rules. The codifying of the approach to financeability in the Rules would promote investor confidence and timely investment, consistent with the long term interests of consumers.

Our proposal builds on the Commission's approach by specifying two elements:

- **An objective financeability test**. The Rules should specify an objective financeability test. The test should be based on the ability of the TNSP to maintain its benchmark rating.
- **A well-defined financeability remedy**. The Rules should allow the minimum change in cashflows required in order to satisfy the financeability test in each year of the regulatory period.

Further details on our proposed approach are provided in the attached submission, which is supported by a report from Frontier Economics and Professor Stephen Gray. Importantly, this report addresses the concerns expressed by the Commission in relation to the application of a financeability test and proposes a workable approach that can be implemented in a transparent and predictable manner.

Our submission also highlights three additional adjustments that are warranted in relation to the revenue setting arrangements for major transmission projects:

- A construction rate of return, which applies during the construction phase of a major transmission project.
- Recovery of biodiversity costs over an appropriate period, recognising that any land acquired for biodiversity purposes is unlikely to have any alternative use value when it is no longer required to be held for the purpose of supporting the transmission project.
- Recovery of early works costs over an appropriate period, noting that the nature of this expenditure differs from that incurred during the construction phase of a project.

By making these additional changes to the regulatory framework, the Commission will provide a revenue stream that is consistent with the National Electricity Objective and the long term interests of consumers. Furthermore, the changes will bolster investor confidence and diminish the potential for financeability risks to arise. We therefore ask the Commission to consider these matters in its final report.

Our submission also responds to other matters in the draft report including the cost recovery arrangements for social licence, the definition of 'preparatory activities' and 'early works' and streamlining the feedback loop arrangements. We support the Commission's objectives and have suggested ways in which they can be enhanced.

Transgrid looks forward to continuing to work with the Commission to develop a regulatory framework that expedites the significant and urgent investment that is required in new transmission infrastructure, as identified by AEMO's 2022 Integrated System Plan.

If you or your staff require any further information or clarification on this submission, please contact myself or David Feeney at david.feeney@transgrid.com.au

Yours faithfully

Brett Redman
Chief Executive Officer

Transmission Planning and Investment Review – Stage 2

Transgrid submission to the Commission's Draft Report

1. Summary

Transgrid welcomes the opportunity to respond to the Australian Energy Market Commission's (Commission) Draft Report on Stage 2 of the Transmission Planning and Investment Review (Draft Report).

In our role as the transmission planner and operator for NSW and the ACT for over 40 years, Transgrid has developed unique expertise and capability in managing one of the key parts of the Australian energy system. Our primary responsibility is to ensure the ongoing security and reliability of the system as it transitions to higher renewables penetration to support Australia's target of a 43% reduction in carbon emissions by 2030 and net zero emissions by 2050.

The Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) is the key planning document used to facilitate the unprecedented energy transition that is taking place across the National Electricity Market (NEM). Federal and State Governments accept that actionable ISP projects must proceed urgently to enable the transition to net zero emissions in a way that minimises total costs to consumers.

To promote the timely and efficient investment in these ISP projects, the regulatory framework must be capable of supporting this investment without transmission network service providers (TNSPs) requiring Government support through subsidised funding. That is, the regulatory framework should support and promote investments that have been determined to be efficient and necessary.

Financeability

Significant transmission investment is necessary to deliver the ISP to support the energy transition. This investment is needed sooner than previously planned, due to the early exit of coal-fired stations, the substantially higher cost of gas and to meet Australia's more ambitious international carbon abatement commitments. Transgrid is committed to investing in and proceeding with the major ISP projects, and has the capital and expertise required to undertake that investment now to support the energy transition. We are well equipped to efficiently scope, manage and deliver these projects at the lowest cost to consumers.

To support the transition, these projects must have revenue profiles that enable them to maintain the benchmark BBB+ credit rating, consistent with the current regulatory approach. Networks cannot fund major new projects by raising additional equity beyond the 60:40 debt to equity ratio, if they only receive the allowed debt return on the additional equity that is sought. Capital is a finite resource, for which network businesses need to compete in an increasingly uncertain capital market in order to deliver the high quality, efficient outcomes that consumers expect.

We welcome the Commission's finding that ISP projects are exposed to financeability risks, which requires a change to the regulatory framework. In reviewing the detail of the Commission's proposal, our view is that the proposed changes could create a sufficient basis for appropriate revenue profiles, but will not address the financeability issue in a way that promotes the long term interests of consumers. Specifically:

- The Commission's proposed approach maximises regulatory discretion, and therefore does not promote transparency and investor confidence, which are essential preconditions for timely and efficient investment. Our experience with Project EnergyConnect shows that there is not always alignment between the views of the network business and the Australian Energy Regulator (AER) regarding financeability risk. Investor confidence will depend on avoiding a repeat of the Project EnergyConnect experience.

- For major transmission projects, upfront planning is paramount in order for the project to be delivered in a manner that maximises net benefits to consumers. In practice, therefore, investors are required to make an 'in principle' commitment to the project early in its development phase when the financeability risks are not fully known. To make such a commitment, investors need a high level of confidence that the AER will address any financeability risk should they arise once the planning phase has been completed. Our concern, however, is that the Commission's proposed approach will not provide this level of confidence because the regulatory treatment of financeability risks will remain uncertain.

- The Commission should give greater weight to the substantial costs to consumers of under investment in relation to ISP projects in formulating its recommendations. In our view, the National Electricity Objective and the revenue and pricing principles in the National Electricity Law (NEL) indicate that the regulatory framework should seek to minimise financeability risk in order to support the timely delivery of prudent and efficient transmission projects.

With the assistance of Frontier Economics, we have further developed the concept of accelerated depreciation as proposed by the Commission and propose an approach that obviates the need for AER guidelines and promotes a more timely resolution of the financeability issue. In summary, our approach:

- Establishes an objective financeability test that can be applied by the AER in a manner that supports investor confidence, promotes timely network investment and minimises the administrative burden on the AER.
- Specifies a clear and mandatory remedy for any financeability problem identified by the financeability test, which would require the AER to make the minimum changes necessary to cashflows in order to satisfy the financeability test.

This approach will provide investors with confidence to commit in a timely manner, in the knowledge that the regulatory framework is equipped to support a BBB+ credit rating, assuming 60% benchmark gearing. We would welcome the opportunity to discuss this proposal in further detail.

In addition to establishing a clearly defined financeability test and remedy, we want to draw the Commission's attention to three other issues that are also relevant to financeability:

- **Construction rate of return**, it is appropriate to allow a construction rate of return to recognise the higher risks during the construction and defect phase of a major project.
- **Timely recovery of biodiversity costs**, noting that these costs are significant and should be recovered over a reasonable period.
- **Timely recovery of early works costs,** noting that the nature of this expenditure differs from the expenditure incurred during the construction phase of a project.

We would also welcome a discussion with the Commission on resolving these additional issues, which should form part of the regulatory solution to minimise financeability risks in accordance with the long term interests of consumers.

Social Licence

Transgrid supports the Commission's position that investment in social licence is critical. We have invested significantly to embed processes and activities to build and maintain social licence in the communities in which we operate.

We agree that existing mechanisms and regulatory obligations are largely appropriate to allow cost recovery for social licence activities. However, there is still a high degree of uncertainty around the nature and extent of social licence costs that can be recovered under these mechanisms, especially those not prescribed in jurisdictional laws but are critical for building community acceptance of major transmission projects. There is a need for some prescription under the National Electricity Rules (Rules) to specify those categories of social licence expenditure that can be recovered by TNSPs. We would be pleased to meet with the Commission to assist in the development of a workable approach on this matter.

Further, we do not believe that social licence costs arising from State planning and environmental processes can be reasonably foreseen or predicted by TNSPs. This unpredictability is inherent in these processes because project-specific issues and stakeholder concerns are only identified during the assessment process. We therefore reiterate the position expressed in our submission to the August 2021 Consultation Paper that a pass-through for costs arising from State planning processes that result in changes to route or project design is appropriate, providing such costs are prudently and efficiently incurred.

Early works and preparatory activities

We agree that the use of the terms 'preparatory activities' and 'early works' when related to ISP projects is confusing. However, we do not agree with the Commission's proposal to remove the reference to 'early works' from the AER and AEMO documentation. Our preference is to retain the term 'early works', as it usefully captures the scope of work during the planning phase of a project, i.e. stage one of a Contingent Project Application (CPA). To address the confusion identified by the Commission, we propose that Rule changes are introduced that define the term 'early works' and explain its relevance in the regulatory process.

Feedback Loop

We support the Commission's view that the feedback loop should be aligned with the publication of AEMO's draft or final ISP. In our view, this approach will address the current challenges in relation to the workability of the feedback loop. In addition to the Commission's proposals, we consider that a two month timeframe for AEMO to complete the feedback loop should be specified in the Rules.

We also support the Commission's view that the CPA process should be allowed to proceed in parallel with the feedback loop process. This approach is essential if delays to delivering ISP projects are to be avoided.

Further detail on each of the above topics is set out in the remainder of this submission.

2. Financeability

2.1. Overview of the Draft Report

The Draft Report proposes that the AER should have the ability to use discretion to shape the cashflows for actionable ISP projects by adjusting the depreciation schedule. The adjusted depreciation schedule would

be provided on a case-by-case basis, where it is in the long-term interest of consumers (balancing inter-generational equity issues with the benefits to consumers of the ISP investments occurring in a timely manner). The Commission comments that it expects that the benefits of 'shaped depreciation' for specific assets will only be realised in 'exceptional circumstances'.

The Commission notes that cashflows can also be modified by adjusting the return on capital, through the AER's Rate of Return Instrument. However, the Commission explains that financeability concerns are only likely to arise for specific projects or businesses and in each case will only persist for a limited time until the financial metrics naturally recover. Accordingly, the Commission does not support a broadly applied increase in the return on capital as it will, in its view, result in higher cost outcomes for consumers.

Under the Commission's approach, the AER would be required to develop a guideline setting out how it will assess whether a variation from the standard depreciation profile should be applied; the information that should be provided by the TNSP in support of its proposal; and any other matters the AER considers appropriate. The proposed Rule change would essentially provide the AER with broad discretion to determine the circumstances under which a shaped depreciation proposal would be accepted.

In rejecting Transgrid's proposal to introduce a financeability check in the revenue setting framework, the Commission explains that this approach would:

- Impose an additional administrative burden on the AER and businesses in their proposals.
- Require that specific metrics are adopted as a measure of a business's financeability, which may not be appropriate in specific cases.

The Commission therefore concludes that a more targeted approach is preferable to a financeability check that would be applied in each revenue determination.

2.2. Our response to the Draft Report

The ISP is the key planning document used to facilitate the energy transition, and has been recently reconfirmed as the roadmap by market bodies and Energy Ministers. Federal and State Governments now fully accept that actionable ISP projects are required urgently to enable the transition to net zero emissions in an orderly fashion that minimises total costs to consumers.

AEMO has estimated expected net benefits of $28 billion from the transmission projects in its Optimal Development Path (ODP)[1], assuming that each project is delivered in accordance with the timeframes specified in the ISP. If these projects are not delivered or materially delayed, then the actual benefits obtained will fall short of the optimal level, contrary to the long term interests of consumers. Transgrid is keen to play its role in delivering the outcomes specified in the ISP by ensuring that the major transmission projects identified in the ODP are delivered on time and on budget.

Historically, the regulatory framework has been effective in facilitating timely transmission investment to meet the needs of electricity consumers. However, the ability to deliver the energy transition is being constrained by a 'building block' approach that was developed for network businesses operating and maintaining a steady-state network.

[1] AEMO, 2022 Integrated System Plan, June 2022, page 15.

This approach has not been modified to accommodate the significant transformation of the NEM that is now urgently required and endorsed by Energy Ministers. The current regulatory framework does not acknowledge the financeability challenges arising from the unprecedented scale and complexity of transmission investment that lies ahead. Project Energy Connect provides a case study of how the financeability risks can be subject to extensive debate, which exposes consumers to the risk of the infrastructure being delayed.

Our strong preference is to resolve the regulatory approach to financeability as soon as possible, rather than wait for the development of AER guidelines, which may be 18 months in the making. The rapid transformation that is taking place across the NEM will not accommodate such a delay in resolving this issue. Furthermore, the industry consultation and debate regarding the detail of the AER's guidelines will tend to exacerbate investors' perceptions of regulatory risk. Instead, our view is that the Commission should develop Rules that reflect regulatory best practice by clarifying how the financeability challenges should be resolved. This approach will promote investor confidence by providing a more timely and clearly defined solution.

In seeking an effective regulatory solution to the financeability challenges, our attention is firmly focused on consumers' long term interests. In this regard, we note the Commission's following comments regarding intergenerational equity:[2]

> "The Commission considers that cash flow should only be brought forward when the consumer benefits of more timely and efficient investment in infrastructure outweigh any negative impacts such as less efficient short-term prices and intergenerational inequity concerns. […] Given this, the AER is the appropriate body to assess whether shaped depreciation to support financeability is warranted on a case-by-case basis."

We acknowledge the Commission's views on intergenerational equity, however, we do not share them. The focus must be on the long term interest of consumers, in accordance with the National Electricity Objective, and whether the long term interests of consumers is best served by addressing financeability risks. In our view, there is a strong case for addressing these risks, noting that not doing so may prevent or delay a major transmission project from proceeding in accordance with the timeframes specified in the ISP, at a significant cost to consumers.

If the Commission is minded to retain its view on intergenerational equity, substantial analysis considering all relevant factors, including the benefits to current and future consumers of accelerated benefits, including those associated with decarbonisation, and potential time-variant consumer preferences, need to be taken into account. In the absence of this analysis, it is not possible to conclude that an intergenerational equity issue arises simply because revenues are brought forward from the standard 'building block' approach.

We also note that the NEL requires the Commission to take into account the revenue and pricing principles in considering matters relating to the regulation of transmission revenues.[3] Section 7A(6) of the NEL sets out the following revenue and pricing principle, which is central to the issues relating to financeability risk:

> "Regard should be had to the economic costs and risks of the potential for under and over investment by a regulated network service provider in, as the case requires, a distribution system or transmission system with which the operator provides direct control network services."

[2] AEMC, Transmission Planning and Investment Review, Stage 2, Draft Report, 2 June 2022, page 16.

[3] Section 88B of the NEL.

In accordance with the NEL, therefore, the economic costs and risks of the potential for under and over investment should be factored into the Commission's approach. Specifically, addressing the financeability risks in relation to an ISP project would not expose consumers to any risk of over investment, but it would avoid the significant costs of under investment. In our view, therefore, an appropriately designed solution to financeability risk would set a relatively low hurdle for accepting a shaped depreciation proposal.

In contrast to the requirements of Section 7A(6) of the NEL, however, the Commission's proposed approach does not appear to give sufficient consideration to the relative risks of under and over investment. In particular, we are concerned that the Commission expects that shaped depreciation should only be permitted in 'exceptional circumstances'. Our view is that it is better to err on the side of caution in taking action to address financeability risks. In adopting this view, we note the AER's most recent analysis shows that 8 of the 32 companies it examined would fail to meet the 7% benchmark FFO to net debt ratio, thereby indicating a significant financeability issue.[4]

As explained in section 2.3, to address these concerns we have developed an alternative approach that will provide investors with the confidence to proceed with major transmission investments in the knowledge that financeability risks will be addressed appropriately should they arise. In addition to this proposal, we have identified three other issues that, if resolved, would also assist in ameliorating financeability risk:

- Construction rate of return;
- Biodiversity costs; and
- Early works costs.

We discuss these issues, and how they may be resolved, before turning our attention to our proposal for improving the Commission's proposed approach to financeability risk.

Construction rate of return

Major transmission projects typically have substantial downside risk which impact construction costs and timeframes, which are considerably greater than the risks with a steady state and mature system. We accept the regulatory framework provides some protections for these risks, however these protections are inadequate for large projects, and the need to mitigate cost and impacts quickly means there is always additional residual risk.

Transgrid considers a 'construction rate of return' is required to recognise the additional risks associated with major construction projects, such as ISP projects. The construction rate of return would only apply during the construction and defect phase of the project, after which the rate of return would revert to the 'business as usual' rate of return.

We understand the Commission considers that the Rate of Return Instrument applies sector wide and cannot establish a separate construction rate of return. We therefore request that, in its final recommendations, the Commission requests Energy Ministers approve a change to the NEL, which would give the AER the flexibility to determine a construction rate of return for ISP projects. We note that the Commission has previously drafted proposed NEL changes – for example in its Review of the Regulatory Frameworks for Standalone Power Systems. This reform could be progressed in a similar way to which the

[4] AER, Draft Rate of Return Instrument, Explanatory Statement, June 2022, page 23.

capacity mechanisms reforms have recently been effectively progressed – with Energy Ministers playing a pivotal role working alongside the ESB and the Commission.

It is important to note that construction risk has been accepted by regulators internationally and, therefore, our suggested approach is consistent with best practice regulation. For instance, Heathrow airport was allowed a special 'construction margin' on capital invested during the construction phase of its new Terminal 5.[5] In addition, the European Union recommended that national regulators allow higher rates of return during the roll-out phase of fibre communication networks.[6] We regard the challenges facing the transmission sector as having strong parallels with these international examples.

Biodiversity costs

In addition to the construction rate of return allowance, our view is that careful consideration also needs to be given to the regulatory treatment of biodiversity costs. At present, biodiversity obligations have the potential to add substantially to the capital expenditure requirements for major transmission projects if they are addressed through land purchase. For example, these costs totalled approximately $125 million ($2017-18) for Project EnergyConnect, and are expected to total approximately $923 million ($2020) for the HumeLink project. The magnitude of these costs alone may be sufficient to create a financeability issue, unless an appropriate regulatory treatment is developed that provides for the recovery of these substantial costs over a reasonable timeframe.

While the appropriate regulatory treatment of biodiversity costs may be achievable under the current Rules, we consider it important to raise this issue specifically with the Commission given its potential impact on financeability risk. Our view is that measures must be put in place now to manage this risk and provide investors with confidence that the regulatory framework is fit for purpose.

Specifically, our view is that land that is acquired for the purposes of meeting biodiversity obligations should be depreciated over an appropriate period. This period should recognise that land acquired for biodiversity purposes is unlikely to have alternative use value when it is no longer required to be held for the purpose of supporting the transmission project.

Early works costs

Early works is a discrete project that is capable of delivering significant value to consumers by fine-tuning the option selection and improving the accuracy of the project cost forecasts.

The specific activities involved in early works may include:

- Stakeholder engagement and social licence acceptance.
- Detailed design works and equipment specifications.
- Early phase procurement, including the development of tender documentation and contractor engagement.
- Land valuation and securing land purchase options.
- Commencement of the project development and approval process.

[5] CAA, Economic regulation of BAA London Airports (Heathrow, Gatwick and Stansted) 2003-2008, February 2003, pages. 44-45.

[6] European Commission, Commission recommendation of 20 September 2010 on regulated access to Next Generation Access Networks (NGA), annex 1, item 6, September 2010.

The nature of these activities is fundamentally different to the construction phase of a transmission project. From a regulatory perspective, therefore, a case can be made for recovering these costs over a comparatively short timeframe, which reflects the nature of the expenditure. Specifically, a new asset class could apply for 'early works' expenditure, so that the costs of this phase of the project can be recovered over a reasonable timeframe.

In our view, this proposal represents a workable and pragmatic approach to managing financeability risk which the Commission should actively consider. In particular, if 'early works' are recovered over a comparatively short timeframe, the risk of financeability issues arising in relation to the construction phase of major transmission projects would be ameliorated.

We note that we did not propose this approach in relation to cost recovery in our CPA for HumeLink Stage 1 (Early Works) and we do not wish to revisit this CPA. However, there is a strong case for adopting a more appropriate cost recovery period for future CPAs.

2.3. Our proposed way forward

As explained above, our view is the resolution of construction rate of return, biodiversity costs and early works will assist in reducing the likelihood of financeability risks arising in relation to ISP projects. In terms of the Commission's specific proposal, our view is that this approach could also be improved. Our strong preference is to include more prescription in the Rules, rather than relying on the development of AER guidelines.

In accordance with regulatory best practice, our view is that the Rules provisions should provide a transparent and predictable regulatory process. To provide investors with the required level of confidence, the regulatory process should provide for:

- **An objective financeability test**. The Rules should specify an objective financeability test that can be applied by the AER and verified by the TNSP. The regulatory financeability test should assess the financeability of the proposed project on a benchmark basis, as though it was a standalone investment, disregarding the broader circumstances or financeability of the TNSP undertaking the project.

- **A well-defined financeability remedy**. The Rules should allow the minimum changes necessary in the cashflows in order to satisfy the financeability test in each year of the regulatory period. As part of the AER's decision in relation to a CPA, it must allow sufficient accelerated depreciation to ensure that the financeability test is satisfied.

The above approach will provide each TNSP with confidence that any financeability risks arising in relation to an ISP project will be addressed. To summarise, the key benefits of our more prescriptive approach are that it:

- Provides TNSPs with an objective financeability test that supports investor confidence and minimises the administrative burden on the AER, thus minimising time and broader cost risks to project and consumers.
- Obviates the need for AER guidelines and therefore promotes a more timely resolution of the financeability issue for projects currently under active development.
- Requires the AER to make the minimum changes necessary to a TNSP's cashflows in order to satisfy the financeability test.

- Provides TNSPs with the confidence to commit funds to major transmission projects in the knowledge that the regulatory framework is equipped to support a BBB+ credit rating.

We engaged Frontier Economics and Professor Stephen Gray to provide further details on how our proposed approach could be operationalised, and their report is provided as an attachment to this submission. In addition to explaining how our proposed approach could be implemented, their report also addresses a number of the issues that the Commission has raised in its draft report in relation to the application of a financeability test.

3. Social Licence

3.1. Overview of the Draft Report

The Commission recognises that TNSPs should continue to invest in social licence activities, as securing social licence is vitally important in enabling the energy transformation. In particular, ensuring the needs and perspectives of stakeholders, communities and landowners are appropriately factored into decision-making is necessary to ensure that investments build social licence.

The Draft Report concludes that the existing cost recovery mechanisms are appropriate and allow TNSPs to recover efficient costs associated with key activities to build and maintain social licence. However, the Commission also seeks stakeholder views on whether any social licence activities are not captured by the existing cost recovery arrangements.

The Commission's Draft Report does not accept Transgrid's proposal that the costs associated with building community acceptance, such as changes to the route alignment required by state planning processes, should be a direct cost pass-through (with appropriate third-party verification). In rejecting this proposal, the Commission argues that the risks can be quantified (and included in the risk allowance for the project) or managed through the staging process in a CPA.

In relation to regulatory obligations, the Commission concludes that the current requirements for TNSPs to undertake stakeholder engagement are largely appropriate. The Commission seeks stakeholder views on whether the Rules provide the right balance of flexibility and prescription in relation to stakeholder engagement, and whether there are any barriers to stakeholder engagement taking place earlier in the RIT-T process.

3.2. Our response to the Draft Report

We welcome the recognition of social licence as an area of critical importance for the timely and efficient delivery of major transmission projects. We further appreciate the acknowledgement of our appointment of the Landowner and Community Advocate for Major Projects as a positive step towards gaining social licence for that project.

Improving our engagement practices

As a first step, we have implemented all 20 of the Landowner and Community Advocate's recommendations for HumeLink and are extending many of these actions into ongoing processes across all major transmission projects. This includes a significant increase in resources allocated to landowner and community engagement and the establishment of Community Consultative Groups (CCGs) for major projects to allow for the two-way sharing of information between Transgrid and communities.

Within Transgrid, a step-change in investment, resourcing and internal capability building is underway to improve the quality of our community and stakeholder engagement and embed processes designed to build and maintain social licence in the communities in which we operate. We have also recently published a revision to our overarching Community Engagement Policy on our website, which sets out a clear policy statement and commitment to place the voice of the community at the centre of our decision making.

Substantial progress has been made over the last 6-9 months on the implementation of a range of social licence initiatives targeted at increasing our ability to respond and consider community needs and to resolve issues of the highest concern to landowners and community members. The most notable of these initiatives are:

- Developing a Route Selection Procedure to set out a consistent and transparent methodology for the selection, design and delivery of augmentation projects, including clear guidance for the role landowners and impacted communities will play at all stages of the project's lifecycle.
- Engaging with the NSW government on landholder easement compensation, with a view to supporting any changes that are fair and equitable.
- Investigating the implementation of annual or periodic payments for landowner easement acquisitions as an alternative to a lump sum compensation payments.
- Exploring approaches to mitigate impacts on neighbouring properties and businesses.
- Undertaking a transmission undergrounding benchmarking study through researching practices in best-practice national and international jurisdictions to inform a corporate position on the circumstances in which Transgrid should consider undergrounding.
- Collaborating with the agricultural industry and other network service providers across the NEM, as a signatory of the Energy Charter, on an independent study into the impacts of transmission infrastructure on agricultural operations.
- Improving consultation and outcomes for Aboriginal communities by developing an enhanced engagement framework and project guidelines to incorporate co-creation of tailored opportunities.

There is a need to codify social licence expenditure categories

We note the Commission's position that:

> "Existing cost recovery mechanisms are appropriate and allow TNSPs to recover efficient costs associated with key activities to build and maintain social licence. The Commission seeks stakeholder views on whether any social licence activities are not captured by the cost recovery arrangements."

We agree with this statement, though note it does not acknowledge the lack of codification within the Rules in terms of the categories of social licence expenditure that TNSPs can recover, as well as what constitutes efficient expenditure within these categories. We regard this gap in the current Rules as a significant issue that should be addressed by the Commission.

The need for greater prescription is of particular importance in light of growing recognition across the electricity sector that to gain community acceptance and successfully deliver major transmission projects, the current levels of landowner compensation may need to be revisited. In addition, there are increasing

calls for shared benefit schemes (such as proximity payments for neighbouring landowners) and on-going community investment schemes (such as regular investment into local infrastructure and community groups).

This additional investment into local communities that will host public infrastructure for many decades, is not a formal requirement under current economic or environmental regulatory approval processes. Within State jurisdictions there is little legislative guidance regarding best practice activities to build social licence and what is reasonable expenditure.

While there are processes and mechanisms under the Rules for individual jurisdictions to develop their own social licence policies and have them considered by the AER, we would not regard this approach as best practice. In particular, there may be a degree of uncertainty as to how the AER will treat jurisdictional policies that are not underpinned by a formal regulatory obligation (e.g. a non-legislated policy). In addition, a highly individualised approach to social licence risks creating inconsistencies and equity issues between different jurisdictions.

The table below provides a non-exhaustive list of social licence expenditure categories for which we consider there is a need for greater prescription under the Rules to reduce uncertainty around the nature and extent of cost recovery.

Social licence cost category	Known to be recoverable	Uncertain if recoverable
Easement compensation	• Market value compensation plus minimal premium/contingency (e.g. 1.2-1.3 times valuation) determined in accordance with *NSW Land Acquisition (Just Terms Compensation) Act 1991*.	• Higher premium negotiated outcome designed to fast track agreement with landowners, support timely delivery and align more closely with wind/solar industry compensation benchmarks. • Additional compensation payments determined outside the Just Terms framework.
Neighbour compensation (separate to easement compensation and impact mitigation)	• Nothing specified.	• Landowner 'proximity payments' e.g. fixed compensation payment to anyone within a certain radius/distance, or graduated benefits that decrease with the distance.
Community investment / benefit sharing / partnerships	• Nothing specified.	• Agreements or contributions to local Councils and/or programs to provide or enhance local community infrastructure or services. • Other partnerships with local businesses or industry e.g. sponsorships. • Community group grants.

Social licence cost category	Known to be recoverable	Uncertain if recoverable
Visual impact mitigation	• Nothing specified.	• Costs associated with route/design changes or physical screening to reduce visual impacts for individual landowners, or at landscape scale i.e. scenic values.
Enhanced Best practice community engagement – eg Community forums, Customer management (CM) software, online portals	• May be included as part of "Early Works". Needs to be in costing assumptions and included in CPA application. • Improvements to CM systems e.g. Salesforce, may be recoverable if approved by the AER.	• Unclear what constitutes "prudent" and "efficient" with respect to best practice.
Biodiversity offsets	• Offset cost estimates determined in accordance with the NSW Biodiversity Offset Scheme at the time of the CPA.	• Updated offset costs due to route/project modifications required through the NSW planning and EIS process.

Risks associated with State planning processes cannot be reasonably predicted in advance

The Commission's current position that costs associated with changes to route alignment as a result of State planning processes can be managed through the staged CPA process, does not adequately recognise the statutory separation of State planning processes from the NEO, NEL and Rules.

State planning processes are underpinned by statutory objectives (e.g. "to facilitate ecologically sustainable development"[7]) and a triple bottom-line assessment framework incorporating economic, social and environmental factors that is fundamentally different to the NEO and the RIT-T/CPA framework. This exposes TNSPs to a very real risk that issues are identified through the planning assessment process, or conditions are imposed by the decision-maker, that introduce significant changes to the route or the broader project.

The nature of the State planning process, which is heavily informed by on-ground assessment and public input, means that issues often emerge late in the assessment process and can be difficult, if not impossible, to predict in advance. Major projects carry a particularly high risk of unforeseen planning issues, due to their complexity and broad scope for social and environmental impacts.

While the staged CPA process can to some extent mitigate risks to TNSPs and deal with these additional costs, this process adds time to overall project delivery and still carries uncertainty around the extent of cost recovery.

[7] Object (b) https://legislation.nsw.gov.au/view/html/inforce/current/act-1979-203#sec.1.3

3.3. Proposed way forward

We consider it appropriate for the Rules to clarify the extent to which the following categories of social licence expenditure can be recovered by TNSPs, subject to being prudent and efficient:

- Easement compensation.
- Neighbour compensation (separate to easement compensation and impact mitigation).
- Community investment / benefit sharing / partnerships.
- Visual impact mitigation.
- Enhanced best practice community engagement – eg Community forums, Customer management (CM) software, online portals.
- Biodiversity offsets.

The inclusion of this guidance in the Rules would provide TNSPs and stakeholders with a clearer understanding of the scope for cost recovery, while also promoting a consistent treatment of social licence costs across the NEM, as far as practicable. We would be happy to meet with the Commission to assist in developing a workable approach on this matter.

We reiterate the position raised in our submission on the August 2021 consultation paper, that a pass-through for costs arising from State planning processes that result in changes to route or project design is appropriate, given such issues are outside a TNSPs ability to predict or control.

4. Cost recovery arrangements for planning activities

4.1. Overview of the Draft Report

The Commission proposed changes to distinguish between planning activities for actionable ISP projects based on whether they relate to the selection or delivery of a preferred option to meet an identified need. Specifically, the Commission proposed to amend the definition of 'preparatory activities' in the Rules to clarify that its purpose is to inform the selection of a preferred option. The Commission also proposes to remove the term 'early works' from AER and AEMO documentation and replacing it with consistent language that characterises activities as either preparatory or not, based on their purpose.

The Commission comments that these changes will clarify that costs to select a preferred option are recovered through the operating expenditure allowance, while expenditure to deliver a preferred option is to be recovered through the CPA process.

The Commission states that TNSPs should be aware of potential preparatory obligations arising from ISPs, as the TNSPs work closely with AEMO to develop the ISP. To the extent that unforeseen cost increases arise, the Commission considers that the current Rules provisions for TNSPs to identify nominated cost pass through events as part of their regulatory proposal is the appropriate mechanism to address this risk.

4.2. Our response to the Draft Report

We agree with the Commission's observations that the current use of the terms 'preparatory activities' and 'early works' has created confusion, particularly as 'early works' is a term that has been adopted in AER and AEMO documentation, but is not defined in the Rules. While we share the Commission's view that the terminology should be clarified, we do not agree with the Commission's proposed solution. In particular, the Commission seeks to distinguish between:

- Expenditure on 'preparatory activities', which the Commission defines as relating to the selection and identification of the preferred option and is recovered through a TNSP's operating expenditure allowance.
- Expenditure relating to the delivery of the preferred option, which is recovered through the CPA process.

The Commission's view that preparatory activities will be remunerated through the TNSP's operating expenditure is not strictly correct because this expenditure will be capitalised if the project proceeds. Furthermore, we note that the Commission's proposal to remove 'early works' from the AER and AEMO documentation may not assist in clarifying the arrangements.

While the use of the term 'early works' is not defined in the Rules, AEMO's explanation of the activities it considers to be 'early works' in relation to an actionable ISP project is helpful in terms of scoping stage 1 of a CPA. In that respect, the removal of the term 'early works' would not assist the TNSPs, the AER or stakeholders in understanding the scope of these activities.

4.3. Our proposed way forward

Our preference is to retain the term 'early works' and make appropriate Rule changes to refer to 'early works' and to include a definition of the term in the Rules glossary. Given the Commission's intention to clarify that preparatory activities relate to option selection and identification, it may be helpful to rename the term 'option selection activities' to provide a clearer distinction to 'early works'.

5. Feedback loop

5.1. Overview of the Draft Report

The feedback loop was introduced as part of the actionable ISP reforms and is designed as a safeguard for consumers. It caps the costs that can be sought by a RIT-T proponent in the CPA.

Stakeholders have raised concerns that a lack of clarity and practical application difficulties undermine the ability of the feedback loop to operate as an effective safeguard for consumers. AEMO's experience of the feedback loop is that it is poorly defined and unworkable. The principal workability issue relates to the requirement that the assessment focuses on the current ODP, as opposed to the ODP that will be included in the publication of the next ISP.

The Commission proposes that the timing of the feedback loop assessment will be aligned with the publication of AEMO's draft or final ISP. In making this proposal, the Commission notes that:

- Alignment with a draft or final ISP will promote timely completion of the feedback loop, while ensuring it draws on the latest available information to operate as an effective consumer safeguard – facilitating timely and efficient investment.
- AEMO will have discretion to establish the timeframe for when the feedback loop assessment is to occur, which can be tailored to the circumstances of a particular investment.
- A feedback loop and Project Assessment Conclusions Report (PACR) exclusion window will apply to cover the period immediately prior to AEMO's publication of the draft ISP – the period where undertaking the feedback loop is least workable for AEMO.

The Commission also proposes that the Rules will be amended to allow the CPA process and feedback loop assessment to proceed concurrently to manage potential bunching of feedback loop assessments around the publication of a draft ISP.

5.2. Our response to the Draft Report

We agree with the Commission that the feedback loop has the potential to delay the timely delivery of ISP projects if AEMO's modelling takes several months to complete. In terms of developing an immediate remedy to this issue, we support the Commission's view that the feedback loop should be aligned with the publication of AEMO's draft or final ISP. Given this proposed alignment, the completion of the feedback loop should take no longer than 2 months and we consider it appropriate that this maximum timeframe is specified in the Rules.

We also support the Commission's view that the CPA process should be allowed to proceed in parallel with the feedback loop being considered by AEMO. This approach is essential if delays to delivering the ISP projects are to be avoided.

In the longer term, enhancements to AEMO's modelling capability may allow the feedback loop to be completed without the need to align the process with the draft or final ISPs.

5.3. Our proposed way forward

We support the Commission's proposed approach to addressing the current challenges in relation to the workability of the feedback loop. In addition to the Commission's proposals, we consider that a two month timeframe for AEMO to complete the feedback loop should be specified in the Rules.

frontier economics

Addressing financeability challenges associated with major transmission investments

Report prepared for Transgrid | 13 July 2022

Disclaimer

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1 Executive summary

1.1 Background

1. The National Electricity Market (NEM) is currently undergoing an unprecedented transition to support Australia's net zero decarbonisation targets. It is widely accepted that significant investment in new electricity transmission infrastructure, to connect new renewable generation assets to the existing grid, is vital in facilitating this transition.
2. Against this backdrop, the Australian Energy Market Commission (AEMC) published a Draft Report as part of stage 2 of the Transmission Planning and Investment Review on 2 June 2022.[1]
3. The Draft Report:
    a. Recognises that major Integrated System Plan (ISP) projects could face financeability challenges that are impediments to prudent and efficient projects that are net beneficial to society proceeding;
    b. Concludes that the existing regulatory arrangements are not sufficiently flexible to address such financeability challenges that may arise in future. In particular, the AEMC considers that the AER should have greater flexibility to "shape" regulatory cash flows by front-loading a Transmission Network Service Provider's (TNSP's) depreciation allowance;
    c. Proposes that the AER should be:
        i. Provided with the flexibility to assess on a case-by-case basis whether a depreciation allowance should be made in order to address a financeability challenge; and
        ii. Required to develop a guideline explaining the circumstances in which an adjustment to the depreciation profile would be required in order to achieve the National Electricity Objective (NEO), the information that a TNSP must provide to support an application to vary its depreciation profile, and any other matters the AER considers appropriate.
4. Essentially, the Draft Report recommends that the AER should be granted the discretion to determine:
    a. whether a particular major ISP project suffers from a financeability challenge;
    b. how such an assessment is to be made;
    c. whether any regulatory action should be taken to address any financeability challenge identified; and
    d. what action, if any, should be taken at all.

1.2 Our instructions and authors of this report

5. Transgrid has asked Frontier Economics to:

[1] AEMC, Transmission planning and investment – Stage 2, Draft Report, 2 June 2022 (Draft Report).

a. Provide an opinion on whether the recommendations set out in the Draft Report are likely to address genuine future financeability challenges that may arise in relation to future major ISP projects; and, if not

b. What alternative regulatory arrangements would be preferable to those proposed in the Draft Report.

6. The remainder of this report addresses these two matters.

7. This report was prepared by Professor Stephen Gray and Dinesh Kumareswaran:

a. Professor Stephen Gray is the Malcolm Broomhead Chair in Finance at the University of Queensland (UQ) and Chairman of Frontier Economics. Stephen advises on issues relating to valuation, cost of capital, corporate financial strategy, and pricing issues. He has advised nearly all regulated businesses in Australia (across industries and jurisdictions) on rate of return matters. Stephen's work on empirical finance, asset-pricing and corporate finance has been published in leading academic and practitioner journals. At UQ Business School, Stephen teaches a range of award and executive education courses in financial management, asset valuation, and corporate finance. He has Honours degrees in commerce and law from The University of Queensland and a PhD in financial economics from Stanford University. He has received a number of academic awards including the Prime Minister's Award for University Teacher of the Year in the Economics and Business field in 2002.

b. Dinesh Kumareswaran is an economist with nearly 20 years of experience in competition and regulatory economics. Dinesh advises regulators and regulated businesses on the different forms of economic regulation, the principles of best practice regulation, asset valuation, regulatory depreciation, the allowed rate of return, forecasts of efficient costs, incentive mechanisms and economic benchmarking. Before joining Frontier Economics, Dinesh was a Senior Economist at New Zealand's competition authority and economic regulator, the New Zealand Commerce Commission. Between 2010 and 2012, Dinesh lectured an MSc course in regulatory finance at the Imperial College Business School, London. Dinesh holds Master's and Honours degrees in economics from Victoria University of Wellington, New Zealand.

1.3 Key findings

8. We note that the Draft Report recommends that the AER should be granted the discretion to determine:

a. whether a particular major ISP project suffers from a financeability challenge;

b. how such an assessment is to be made;

c. whether any regulatory action should be taken to address any financeability challenge identified; and

d. what action, if any, to accelerate cash flows via depreciation allowances should be taken.

9. In our view there are three serious shortcomings with the proposals set out in the Draft Report that make them unworkable in practice. Specifically:

a. The Draft Report restricts the possible solutions to a financeability problem too narrowly to adjustments to the depreciation allowance only.

b. The Draft Report proposes to endow the AER with too much discretion to assess whether a financeability problem exists, and whether/how any such problem should be addressed.

The resulting uncertainty does little to enhance the confidence of investors that any genuine financeability challenges that might be encountered would be addressed in any meaningful way by the regulatory arrangements—particularly since investors are expected to commit funds to major transmission projects well before the AER would be required to undertake any financeability assessment.

c. The Draft Report proposes that any financeability issue would be addressed too late in the process. Large ISP projects involve very substantial investment in early works (CPA1) before the precise nature of any financeability issues are known. Only after this expenditure can the financeability issues be properly quantified. The Draft Report proposes that the AER's discretion would be exercised at this point. Thus, a project proponent would need to incur the costs of these early works, and an effective social obligation to complete the project, without knowing how the AER might deal with any identified financeability issue – or even whether the AER might agree with the proponent's definition of what constitutes a financeability problem.

10. In order to address these shortcomings and ensure an objective and reliable framework for addressing genuine future financeability problems, we recommend that four key changes to the regulatory framework be made, rather than the proposals presented in the Draft Report:

a. **Application of an appropriate rate of return.** All major transmission investments approved via a CPA process should be permitted to a rate of return that offers appropriate compensation for the construction risks associated with developing those projects (rather than the standard BAU rate of return applied to existing assets) for a defined period of time/until the project has been completed/assets commissioned. Thereafter, the assets would be rolled into the RAB and earn the standard BAU return determined by the AER using the Rate of Return Instrument (RORI).

b. **Introduction of 'as incurred' depreciation allowances.** As noted in the Draft Report, TNSPs are permitted to earn regulatory depreciation allowances on new assets once those assets have been fully commissioned. This has the effect of delaying regulatory cash flows, and could contribute toward a financeability problem. In our view, TNSPs should be permitted to earn a return of capital on all forecast capital expenditure (even if the project has not yet been commissioned), in the same way DNSPs are currently permitted to. This would bring forward some allowed revenues, smooth prices for future consumers and at least partially help address financeability concerns faced by some TNSPs.

c. **Introduction of an objective regulatory financeability test.** The NER should mandate a prescriptive financeability test that:

i. Must be implemented by the AER when making a CPA determination for any major transmission investment project;

ii. Is consistent with the way in which rating agencies such as Moody's assess financeability quantitatively;

iii. Is based entirely on 'benchmark' assumptions (i.e., benchmark revenues, costs, allowed returns, gearing and credit rating) so is uncontaminated by the actual financeability of the business undertaking the project; and

iv. Is capable of identifying in a mechanistic way whether a financeability problem is likely to arise in one or more years of a regulatory period. The mechanistic nature of the test would remove any discretion the AER would have about whether the test has been passed or failed.

d. **Specification of a clear and mandatory remedy for any financeability problem identified by the regulatory financeability test.** If the AER has set the rate of return allowance for the project appropriately, then the only reason a financeability problem would arise is if there is a temporary cash flow shortfall. The remedy for that problem is to reprofile (bring forward from future periods) revenues in an NPV-neutral way.

2 AEMC analysis of financeability

2.1 Potential causes of financeability challenges

11. The Draft Report identifies correctly that financeability challenges arise if there is a mismatch between the regulatory cash flows associated with a project and the financing costs of that project:

> *Financeability concerns for a TNSP may arise from the way that cash flow is impacted by major investments. When a network business invests in a project, it starts receiving a return on the investment based on forecast capital expenditure. However, the business does not start receiving a return of the investment (depreciation) until the investment is commissioned. As depreciation typically occurs on a straight-line basis, this cash flow meets the project's requirements over its lifetime. However, this profile may not match the profile of financing requirements. Specifically, it does not match the requirements to meet the higher levels of debt in early years, but is greater than the debt attributed in later years. In the absence of changes to the business' capital structure, this may in the short term negatively impact some of the financial metrics that form part of the range of factors that are used to assess the creditworthiness of a business. In particular, the ratio of funds from operations (FFO) to net debt (or FFO/net debt).*[2]

12. The Draft Report characterises financeability challenges as temporary cash flow shortfalls that can place "short term" pressure on a TNSP's key financial metrics and, therefore, its credit rating. For example, in the quote above, the Draft Report suggests that a financeability problem may arise for a TNSP because the return of capital invested in a major transmission project (i.e., the regulatory depreciation allowance) is delayed until the assets are commissioned.

13. We agree that some TNSPs may face financeability challenges due to short-term cash flow shortfalls. However, this framing of the problem fails to recognise that TNSPs may also face financeability challenges if they are not permitted, under the regulatory arrangements, to recover their efficient costs. For example:

    a. A TNSP may face a financeability problem if the regulator sets an allowed return on capital that is insufficient to cover investors' true cost of capital (i.e., if investors are not provided with a sufficient return to compensate them for the non-diversifiable risks that they bear when committing capital to the project). This issue is discussed further in section 2.3.

    b. Transgrid has advised us that there is uncertainty regarding the regulatory treatment of costs relating to biodiversity offsets. These costs can be very material for major transmission investments. For example, these costs totalled approximately $125 million ($2017-18) for Project Energy Connect,[3] and are expected by Transgrid to total approximately $923 million

[2] Draft Report, p. 11.

[3] AER, Transgrid Contingent Project – Project EnergyConnect, Final Decision, May 2021, p. 23.

($2020) for the HumeLink project.[4] Costs of this magnitude may raise financeability concerns, depending on the cost recovery arrangements.

14. In our view, the AEMC should recognise that TNSPs will face financeability challenges if regulatory allowances are set too low to cover efficient costs.

15. In summary, there are two aspects to financeability:

    a. The allowed return must be sufficient to compensate for the risk incurred. This is required for a project to be NPV=0; and

    b. Having identified a set of NPV=0 regulatory allowances, the timing of those cash flows may require alteration in an NPV-neutral way to meet cash flow challenges while preserving the NPV=0 nature of the regulatory allowance.

2.2 Assessment of the Draft Report's recommendations

16. We agree with the AEMC that financeability challenges could delay or altogether prevent prudent, efficient and net-beneficial projects (that are in the long run interests of consumers) from proceeding. Such outcomes would be contrary to NEO, which is to:

> *to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:*
>
> - *price, quality, safety and reliability and security of supply of electricity*
> - *the reliability, safety and security of the national electricity system.*

17. This is particularly true in the context of the energy transition that is currently occurring in the NEM, and the need for significant investment in transmission infrastructure to support this transition.

18. We therefore support the AEMC's conclusion that the existing regulatory arrangements need improvement in order to ensure that major required transmission investments are not inefficiently delayed or foregone.

19. However, in our view there are three serious shortcomings with the proposals set out in the Draft Report that make them unworkable in practice. Specifically:

    a. The Draft Report restricts the possible solutions to a financeability problem too narrowly to adjustments to the depreciation allowance only.

    b. The Draft Report proposes to endow the AER with too much discretion to assess whether a financeability problem exists, and whether/how any such problem should be addressed.

       The resulting uncertainty does little to enhance the confidence of investors that any genuine financeability challenges that might be encountered would be addressed in any meaningful way by the regulatory arrangements—particularly since investors are expected to commit

[4] HumeLink PACR Net Present Value Model.

funds to major transmission projects well before the AER would be required to undertake any financeability assessment.

c. The Draft Report proposes that any financeability issue would be addressed too late in the process. Large ISP projects involve very substantial investment in early works (CPA1) before the precise nature of any financeability issues are known. Only after this expenditure can the financeability issues be properly quantified. The Draft Report proposes that the AER's discretion would be exercised at this point. Thus, a project proponent would need to incur the costs of these early works, and an effective social obligation to complete the project, without knowing how the AER might deal with any identified financeability issue – or even whether the AER might agree with the proponent's definition of what constitutes a financeability problem.

20. The remainder of this section explains each of these shortcomings in further detail.

2.3 Restriction of regulatory solutions to depreciation alone

21. In our view, the Draft Report unreasonably focusses on the adjustment of regulatory depreciation as the only appropriate solution to a financeability problem. In doing so, the Draft Report rules out any solution that involves the allowed rate of return on the grounds that financeability challenges are likely to be short-lived and affect only some specific projects or TNSPs:

> *While the AER has some flexibility to manage financeability concerns through changes to the rate of return settings, this approach is not appropriate to address the short-term impact of major investments on financial metrics and financeability. Adjusting the approach to the rate of return would apply across all network businesses, including TNSPs and distributed network service providers (DNSPs). Adjusting the rate of return is, therefore, appropriate to address systemic changes in costs or risks for all businesses.*
>
> *Financeability concerns on the other hand are likely to arise only for specific projects or businesses and in each case will only persist for a limited time until the financial metrics naturally recover. Adjusting the rate of return to address financeability concerns for some businesses would likely result in higher costs for consumers across the broader system than are efficient to provide appropriate signals to invest in major projects in a timely manner, and would therefore not be in their long-term interests. Accordingly, the Commission considers that other more appropriate and targeted tools to address financeability concerns should be explored.*[5]

22. Financeability problems arise if the cash flows available to a firm are insufficient to service its debt obligations with sufficient headroom to maintain its credit rating. An important reason why a regulated firm's cash flows may be insufficient is if its allowed rate of return is set too low, relative to the firm's true cost of capital.

23. The Draft Report appears to assume implicitly that the AER will always set an allowed rate of return that matches its true cost of capital (i.e., the minimum return required by investors to commit

[5] Draft Report, p. 16.

capital to the firm). That is assumption is unlikely to be true for major transmission projects of the kind envisaged by the ISP, for the reasons explained below. In essence, if the AER allows the same return on all regulated assets, and if ISP projects involve risks that do not apply to other regulated assets, there can be a mis-match between the regulatory allowance and the efficient cost.

24. The life cycle of major investment projects can be divided broadly into two phases:

    a. An initial construction phase (including design and early works); and

    b. A business as usual (BAU) phase following the construction phase, during which the asset is operated and maintained by the owner.

25. The risk profile of the project is likely to be very different during these two periods:

    a. During the initial construction phase, the project resembles any other major 'greenfield' infrastructure construction project and is exposed to construction risks.

       In order for the investors to just recover their efficient costs and no more (i.e., in order for the project to be NPV=0) during this phase, they must be allowed to recover the efficient costs associated with planning, designing and building the project—including an appropriate return for bearing construction risks.

    b. Once the asset has been commissioned and moves into the BAU phase, the risks borne by the asset owner relate to operating and maintaining the infrastructure.

       In order for the investors to just recover efficient costs and no more during this phase, they must be allowed to recover (over the remaining economic life of the asset) the initial asset value at the time of commissioning, operating and maintenance costs, and an appropriate return for BAU risks.

26. The National Electricity Law (NEL) requires the AER to develop a binding RORI to set a rate of return allowance, and which must be applied to all TNSPs and Distribution Network Service Providers (DNSPs). The rate of return produced by the AER's RORI is a standard BAU rate of return that provides no material compensation for construction risks.[6] If the required compensation for bearing construction risk exceeds the return required to compensate for the risks of operating and maintaining the asset, then the application of a BAU return to a major transmission project during its initial construction phase would result in the investors being undercompensated for the risks they bear prior to the asset being commissioned.

27. In our view, TNSPs should be allowed to earn a rate of return that is commensurate with the risks they face during each of the two distinct phases outlined above. The application of a rate of return that compensates investors fairly for the risks they bear during the construction phase would likely deliver the TNSP higher cash flows during that period. This, in turn, would help ameliorate (but not necessarily eliminate) any financeability challenges that may occur during the initial construction phase.

28. Once construction has been completed and the asset has been commissioned, the assets could be rolled into the TNSP's existing Regulatory Asset Base (RAB) and be permitted to earn a BAU rate of return. Thus, the rate of return that provides compensation for construction risk would be applied only for a limited time, rather than indefinitely.

[6] Some of the capital investments undertaken by NSPs during the BAU phase, including minor augmentation expenditure, may involve some minor construction activity that is far less material than would typically occur in major transmission projects.

29. In essence, the allowed return must compensate for the risk that is borne at each stage for the project to be NPV=0 over its life.

30. Section 3 explains how the proposal outlined above could be implemented within the regulatory framework.

31. We recognise that the current NEL may not provide the AER with flexibility to determine different allowed rates of return for different types of projects/assets, or for projects at different stages of their life cycle. Therefore, some legislative changes may be required in order to permit the AER to set a separate rate of return allowance for major transmission projects during their construction phase.

32. Whilst the AEMC does not have the authority to make such legislative changes, it would be helpful for the AEMC to:

    a. Recognise as part of the current review that major transmission projects (e.g., ISP projects) face significant construction risk that BAU investments do not;

    b. Recognise that the risks faced by TNSPs during the construction phase of major transmission investment projects may differ from the risks faced during the BAU phase. The extent to which these differences in risks actually affect the required rates of return would be an empirical matter for the AER to investigate, consult on and ultimately make a determination; and

    c. Affirm the principle that TNSPs should be compensated appropriately for the risks they bear in each of these two distinct phases in the life cycle of a major transmission project.

2.4 AER discretion

33. The Draft Report proposes that the AER should be conferred with complete discretion to determine:

    a. the process and methodology for assessing the financeability of individual major transmission projects (by way of a guideline);

    b. whether or not any financeability challenge identified ought to be addressed through regulatory action; and

    c. the nature and extent of any regulatory action that ought to be taken.

34. In our view, granting the AER such broad discretion over how it would assess financeability and whether/how it would address any financeability concern identified is unlikely to promote investor confidence. This is because the AER's recent actions and statements demonstrate an unwillingness to recognise genuine financeability challenges when they have emerged. This includes a prominent recent case, where a major ISP project proposed by Transgrid that had passed a rigorous RIT-T assessment very nearly did not proceed because it was not financeable under the regulatory allowances the AER had set, and which ultimately required special Government support in order to go ahead.

35. During the recent financeability participant derogation rule change review, Transgrid submitted to the AEMC that it would be unable to proceed with Project Energy Connect (PEC) because the regulatory cash flows from the project would be insufficient to support 60% debt funding at a BBB+ credit rating (or indeed an investment grade credit rating at all) for an extended period of time.

36. The AER's response to this submission was that:[7]

    a. It was unclear that Transgrid faced a financeability challenge that required any regulatory response—particularly since Transgrid had only identified the impact of the project on a single debt metric, the FFO/net det ratio;

    b. If a financeability problem did exist, Transgrid should seek to address the problem through its own means, including by adopting a different capital structure, "before requiring a regulatory response funded by consumers"; and

    c. The "primary responsibility for managing financeability rests with the regulated businesses."

37. Ultimately, PEC was only able to proceed because Transgrid secured a $295 million commitment of mezzanine debt finance by the Clean Energy Finance Corporation (CEFC). This is a clear indication that Transgrid faced a genuine and material financeability problem that the AER failed to recognise at the time Transgrid was seeking regulatory allowances that would allow the project to proceed.

38. The AER recently presented financeability analysis as part of its 2022 Rate of Return Instrument (RORI) review. In that analysis, the AER only considered a single debt metric—the FFO/net debt ratio—having characterised this as a shortcoming of Transgrid's analysis. Despite finding that 25% of the NSPs it analysed had fallen short of the financeability threshold it had defined, the AER concluded that:

> *our analysis does not suggest that financeability has emerged as a problem under our 2018 Instrument.*[8]

39. The AER's evident reluctance to support any regulatory action to address genuine financeability problems when they have arisen indicates that it is unlikely that the AER would be inclined to act in future to address financeability challenges. We therefore doubt that the Draft Report's proposal to grant complete discretion to the AER to design and implement assessments of financeability would enhance investor confidence.

40. This means that prudent and efficient major transmission investments that would deliver large net benefits to consumers may be delayed significantly (thus also delaying the consumer benefits from those projects) or be foregone altogether.

41. The process for proposing and securing regulatory allowances for major transmission investments (e.g., through a Contingent Project Application (CPA) review) is lengthy, entails the proponent making significant reputational and cost commitments, and involves investors taking on significant risk and uncertainty. The point at which the AER would, under the arrangements proposed in the Draft Report, make an assessment about the financeability of the project would be at the very end of this lengthy process. The absence of a clear, predictable and binding framework governing how financeability problems would be diagnosed and addressed would add further to the risk and uncertainty already faced by proponents of major transmission projects.

[7] AER submission – Consultation on TransGrid and ElectraNet participant derogations – Financeability of ISP projects, 3 December 2020, p. 2.

[8] AER, Rate of Return Instrument, Draft Explanatory Statement, June 2022, p. 267.

42. Proponents may be reluctant to identify and bring forward good projects unless they have full confidence at the very start of the process that the regulatory arrangements are capable of objectively and reliably identifying and addressing genuine financeability problems that may arise.

43. In these circumstances, we consider that the NER should be amended to:

    a. Mandate that the AER must perform a regulatory financeability test when making a revenue determination for major transmission investments through a CPA process;

    b. Specify the precise form of the financeability test, including the requisite calculations, that the AER must perform when conducting such a regulatory financeability test;

    c. Prescribe a mechanistic and repeatable process to determine whether the proposed project has failed or passed the regulatory financeability test under the AER's proposed allowances; and

    d. Prescribe what action the AER must take to remedy any financeability problem identified by the mandated regulatory financeability test.

44. Section 3 explains how the recommendations outlined in paragraph 43 could be operationalised.

2.5 Timing of the exercise of AER discretion

45. Another issue with the approach proposed in the Draft Report is the time in the process at which the AER's discretion would be exercised. Large ISP projects involve very substantial investment in early works (CPA1) before the precise nature of any financeability issues are known. Only after this expenditure can the financeability issues be properly quantified.

46. The Draft Report proposes that the AER's discretion would be exercised at this point. Thus, a project proponent would need to incur the costs of these early works, and an effective social obligation to complete the project, without knowing how the AER might deal with any identified financeability issue – or even whether the AER might agree with the proponent's definition of what constitutes a financeability problem.

47. The approach that is proposed below places some structure around the identification and treatment of financeability issues to provide a degree of certainty to project proponents.

3 Recommended arrangements

48. The previous section identified three key shortcomings associated with the changes to the regulatory framework proposed in the Draft Report to address future financeability challenges:

    a. The Draft Report identifies adjustments to the depreciation allowance as the only way of addressing financeability problems, eschewing any solution that may involve the allowed rate of return;

    b. The Draft Report proposes that the AER would be given complete discretion to determine how financeability should be assessed, and whether/how any financeability problem should be addressed; and

    c. The financeability issue would be considered too late in the process to have a meaningful impact.

49. In order to address these shortcomings and ensure an objective and reliable framework for addressing genuine future financeability problems, we recommend that four key changes to the regulatory framework be made, rather than the proposals presented in the Draft Report:

    a. **Application of an appropriate rate of return.** All major transmission investments approved via a CPA process should be permitted to a rate of return that offers appropriate compensation for the construction risks associated with developing those projects (rather than the standard BAU rate of return applied to existing assets) for a defined period of time/until the project has been completed/assets commissioned. Thereafter, the assets would be rolled into the RAB and earn the standard BAU return determined by the AER using the Rate of Return Instrument (RORI).

       This recommendation is discussed below in section 3.1.

    b. **Introduction of 'as incurred' depreciation allowances.** As noted in the Draft Report, TNSPs are permitted to earn regulatory depreciation allowances on new assets once those assets have been fully commissioned. This has the effect of delaying regulatory cash flows, and could contribute toward a financeability problem. In our view, TNSPs should be permitted to earn a return of capital on all forecast capital expenditure (even if the project has not yet been commissioned), in the same way DNSPs are currently permitted to. This would bring forward some allowed revenues, smooth prices for future consumers and at least partially help address financeability concerns faced by some TNSPs.

       This recommendation is discussed below in section 3.2.

    c. **Introduction of an objective regulatory financeability test.** The NER should mandate a prescriptive financeability test that:

       i. Must be implemented by the AER when making a CPA determination for any major transmission investment project;

       ii. Is consistent with the way in which rating agencies such as Moody's assess financeability quantitatively;

       iii. Is based entirely on 'benchmark' assumptions (i.e., benchmark revenues, costs, allowed returns, gearing and credit rating) so is uncontaminated by the actual financeability of the business undertaking the project; and

iv. Is capable of identifying in a mechanistic way whether a financeability problem is likely to arise in one or more years of a regulatory period. The mechanistic nature of the test would remove any discretion the AER would have about whether the test has been passed or failed.

This recommendation is discussed below in section 3.3.

d. **Specification of a clear and mandatory remedy for any financeability problem identified by the regulatory financeability test.** If the AER has set the rate of return allowance for the project appropriately, then the only reason a financeability problem would arise is if there is a temporary cash flow shortfall. The remedy for that problem is to reprofile (bring forward from future periods) revenues in an NPV-neutral way.

This recommendation is discussed below in section 3.4.

3.1 Application of an appropriate rate of return

50. As explained in section 2.3, the construction activity involved in developing major transmission projects exposes investors to risks that are inherently different to those associated with BAU investments. Hence, the BAU rate of return allowance currently set by the AER will generally not compensate investors fairly for the risks associated with such projects.

51. In order for investors to be compensated appropriately for the risks they bear, we recommend that the AER provide a construction-specific rate of return allowance for any transmission projects approved under the CPA process.

a. This rate of return allowance for construction risk would be applied only during the construction phase of the project, for instance by applying a construction-specific rate of return to a construction Regulatory Asset Base (RAB). Once the asset has been fully commissioned, it would be rolled into the TNSP's standard RAB and earn the BAU rate of return applied to all existing assets.

b. Hence, this construction-related rate of return allowance would be strictly time-limited and targeted only at major transmission projects above a certain size threshold.[9] This would address the AEMC's concerns that using the rate of return to address a financeability problem would be inappropriate because financeability challenges are likely to be limited only to the "short-term" and are likely to be faced only by "specific projects or businesses."[10]

c. If the AEMC is concerned that applying a construction-specific rate of return (that is potentially higher than the BAU rate of return) until the asset is commissioned may weaken TNSPs' incentives to deliver the project on time, then the period over which the construction-specific rate of return applies might be fixed in advance.

d. The AER would be given the responsibility to develop the methodology to be used to determine this construction-related rate of return. In practice, this would only require the AER to make separate determinations in relation to four parameters for a standalone, benchmark construction project:

[9] The size threshold for a CPA review relates to the scale of the forecast expenditure related to the project. Under the NER, the forecast capex of a qualifying CPA project must be "either $30 million or 5% of the value of the maximum allowed revenue for the relevant Transmission Network Service Provider for the first year of the relevant regulatory control period whichever is the larger amount." See NER, clause 6A.8.1(b)(2)(iii). Under the proposal above, projects that fall below this size threshold would not qualify for a construction-related rate of return allowance.

[10] Draft Report, p. 16.

i. The equity beta;

ii. Gearing;

iii. The benchmark credit rating; and

iv. The return on debt allowance.

All the other parameters used to set the construction-related rate of return allowance could be determined using the RORI prevailing at the time of the CPA determination. Hence, the AER's task of determining the methodology for setting the construction-related rate of return would not be as onerous as a full RORI review.

Moreover, the return on debt allowance would follow the AER's approach for BAU assets, but applied to the 'construction' credit rating. That approach is currently to use third-party data source estimates of the yield on 10-year Australian corporate bonds of the relevant credit rating.

To the extent that the AER determines the 'construction' credit rating to be the same as the (BBB+) BAU rating, this exercise would only involve the computation of two WACC parameters.

52. For the avoidance of doubt, the principal rationale for applying a construction-related rate of return to major transmission projects is to ensure that investors are compensated appropriately for the risks they bear during the initial construction phase of these projects. That is, the purpose would be to ensure that the NPV=0 principle that underpins the AER's regulatory framework is satisfied. This would send the appropriate signals for prudent and efficient investment, thereby promoting the NEO.

53. That is why we recommend this approach be applied to all major transmission projects that are determined through the CPA process, and not be limited to only those projects where a financeability problem has been identified.

54. However, since the construction-related rate of return is higher than the BAU rate of return, the implementation of the approach we recommend above will have the additional benefit of at least partially addressing any financeability challenges that may be faced by certain major transmission projects. That is to say, one reason some major transmission projects may face financeability challenges is because the TNSP undertaking the project is being undercompensated by too low a rate of return. Ensuring that the allowed rate of return is set in line with the minimum required return would improve the financeability of such projects.

3.2 Introduction of 'as incurred' depreciation allowances

55. The AEMC explains that, in its view, TNSPs undertaking large transmission projects may face financeability challenges because these businesses are not permitted to earn a return on capital until the assets being constructed have been commissioned:

> *Financeability concerns for a TNSP may arise from the way that cash flow is impacted by major investments. When a network business invests in a project, it starts receiving a return on the investment based on forecast capital expenditure. However, the business does not start receiving a return of the investment (depreciation) until the investment is commissioned. As depreciation typically occurs on a straight-line basis, this cash flow meets the project's requirements over its lifetime. However, this profile may not match the profile of financing requirements. Specifically, it*

does not match the requirements to meet the higher levels of debt in early years, but is greater than the debt attributed in later years. In the absence of changes to the business' capital structure, this may in the short term negatively impact some of the financial metrics that form part of the range of factors that are used to assess the creditworthiness of a business.[11]

56. During the financeability participant derogation rule change review, the AER recognised this and noted that whilst it sets 'as incurred' depreciation allowances for DNSPs, it does not do so for TNSPs:

An alternative rule change would be to move to as incurred depreciation for all ISP investments but to not remove RAB indexation. We already use as incurred depreciation for distribution businesses. We note as incurred depreciation also brings forward some revenue recovery into the earlier years of project construction. It would remove the cash flow dip that is evident during the construction stage of ISP projects[12]

57. As the AER has previously recognised, setting 'as incurred' depreciation allowances would bring forward the recovery of costs and, therefore cash flows that could help address any financeability challenges faced by the firm.

58. The AEMC considered during the financeability participant derogation rule change review that it should not adopt the proposal to implement as incurred depreciation for TNSPs as this may disincentivise firms from completing projects in a timely way, and transfer delay and completion risks onto consumers:

moving to as incurred depreciation, as proposed by TransGrid, may weaken incentives for businesses to complete capital projects in a timely and efficient fashion (for example, through careful contracting and effective monitoring throughout the construction process). This is because the more income a business receives prior to completion of a project, the less incentive there is to complete the project. In this sense, a move to as incurred depreciation would transfer the "delay" and "completion" risks associated with its ISP projects from the business to consumers who are not in a position to be able to manage this risk.

59. Such an outcome seems unlikely to us because delays and time overruns are often also attended by cost overruns that would ultimately be borne by the TNSP. This should provide strong disincentives for the TNSP to inefficiently delay delivery of projects. However, even if the AEMC's reasoning were correct, it should balance those considerations against the risk of welfare-

[11] Draft Report, p. 11.

[12] AER submission – Consultation on TransGrid and ElectraNet participant derogations – Financeability of ISP projects, 3 December 2020, p. 2.

enhancing transmission projects being delayed or not proceeding at all due to financeability problems that could be avoided or limited by bringing forward cost recovery for the TNSP.

60. For these reasons, and given the AEMC's acceptance that financeability challenges could arise in future, we think it would be appropriate for the AEMC to revisit the option of applying as incurred depreciation to TNSPs.

3.3 Introduction of an objective regulatory financeability test

61. We recommend that the NER mandate that the AER must perform a regulatory financeability test as part of every CPA determination it makes in relation to major proposed transmission projects.

3.3.1 Role of the regulatory financeability test

62. The key role of the regulatory financeability test would be determine whether the regulatory allowances set by the AER in its CPA determination are sufficient to support the credit rating that is assumed by the AER when it sets the rate of return allowance.

63. Most regulators that undertake financeability tests as part of their regulatory determinations do so on a 'benchmark' basis—i.e., using only benchmark revenues, costs, allowed returns, gearing and credit rating to perform the necessary calculation of the financial metrics used in the test. For example, ESCV, ESCOSA, and UK regulators Ofgem and Ofwat all apply financeability tests to the benchmark efficient entity – the equivalent of using figures from the PTRM in the AER's setting. IPART applies a financeability test to the benchmark entity as well as to the actual business (taking into account all aspects of the financial position of the owner of the regulated asset). However, IPART has explained that the explicit role of the test performed on a benchmark basis is test the adequacy of the regulatory allowance. All of the required inputs to the benchmark financeability test may be obtained readily from the AER's Post-tax Revenue Model (PTRM). This ensures that the financeability problem identified by the test cannot be attributed to the actual financing decisions of the business undertaking the project.

64. The AER has recently explained that:

> *We acknowledge that financeability tests can help assess whether a hypothetical entity with a capex program, gearing and level of risk, reflected in our rate of return allowance, can raise debt at the credit rating consistent with the benchmark credit rating.*[13]

65. If a financeability test is conducted on a notional benchmark firm (i.e., the same basis on which the AER sets revenue allowances) and confirms that revenue allowances are likely to support the assumed credit rating, then one would conclude that there is no financeability concern (in respect of a benchmark efficient firm). However, if the financeability test indicates that the revenue allowances would be insufficient for a notional benchmark firm to maintain the credit rating assumption used to set the allowances in the first place, that would indicate an internal inconsistency in the regulatory determination that should be fixed. This should be regarded as a failure of the regulatory financeability test.

[13] AER, Overall rate of return, equity and debt omnibus, Final working paper, December 2021, p. 124.

66. In those circumstances, the only appropriate remedy for a failure of the regulatory financeability test would be for the regulatory allowances to be adjusted. An appropriate remedy would not be for the investors to "manage" the financeability problem by changing the firm's capital structure or by any other means—as the AER and the AEMC has previously suggested. This is because the source of the problem is an internal inconsistency in the allowances, and because the test was performed entirely on a benchmark basis.

67. Any suggestion that a notional benchmark firm could or should manage a financeability problem by altering its capital structure, while maintaining the same regulatory allowance, could be described as a 'magic pudding' solution. This is because the firm would be required to bear costs without receiving regulatory compensation. Rather, the notional benchmark firm must, by definition, always maintain the benchmark gearing determined by the regulator.

68. The AER has previously argued that even if the financeability test were performed on a benchmark basis, a financeability problem for the benchmark business should be viewed as a problem for the owners of the actual business to manage. In other words, it would never matter if the benchmark business failed the financeability test, because the regulator could always assume that the actual owners in the real world could take steps to fix the problem, even though they would not be compensated for doing so. Such reasoning is incorrect in our view for two reasons:

    a. Firstly, under such an approach, there would be no circumstances in which any regulatory action would ever be required—since the solution to any financeability problem (no matter how severe) would be to simply assume it away by shifting the responsibility onto the owners, even if the source of the problem was the regulatory regime itself. This would effectively render the financeability test redundant.

    b. Secondly, the approach suggested by the AER involves abandoning the standard benchmark framework that underpins incentive regulation in Australia. It would be akin to the regulator estimating the efficient costs of a benchmark firm to be $X, but then setting allowed revenues below $X because it considered that the owners of the actual firm should be able to absorb or manage the shortfall. Such an approach is not permitted under the NER because it confuses the concepts of benchmark efficient costs and actual costs, and would not result in outcomes that promote the long-term interests of consumers. Similarly, the NER should not require (or assume) that the failure of a regulatory financeability test, performed on a benchmark basis, will be solved by the owners of the actual regulated business providing an uncompensated subsidy.

3.3.2 Form of the proposed benchmark test

Focus on quantitative rather than qualitative considerations

69. The financeability tests conducted by credit rating agencies involve considering a number of qualitative 'rating factors' (e.g., regulatory environment and asset ownership model, scale and complexity of capital program, and financial policy) as well as quantitative rating factors (e.g., key financial metrics).

70. Regulatory financeability tests, while modelled on certain aspects of the financeability tests performed by rating agencies, do not seek to replicate the tests conducted by rating agencies. Regulatory financeability tests are focussed exclusively on whether the key financial metrics of the hypothetical efficient firm meet certain rating thresholds (i.e., target ratios); no consideration is given to the qualitative rating factors considered by rating agencies because (a) some of those qualitative factors are not relevant to the regulatory task, and (b) the way in which rating agencies apply their judgment when assessing those factors is usually not transparent or replicable.

71. Consistent with standard regulatory practice, the mandatory regulatory financeability test we propose would focus only on the quantitative assessment of key credit metrics.

72. The AER has suggested recently that it is not possible to replicate the sort of financeability assessment performed by rating agencies, because such assessments involve subjective judgment:

> *Financeability tests aim to assess whether a business is able to raise debt capital at a given credit rating. In practice these assessments are undertaken by rating agencies and are informed by subjective judgements and financial metrics. Therefore, it is not possible to undertake a hypothetical assessment for a benchmark firm with precision. As such, regulators typically condense their analysis to a review of financial metrics against a benchmark rule of thumb.*[14]

73. For the avoidance of doubt, we do not propose that the regulatory financeability test replicate the full assessment that rating agencies perform. Rather, we consider that the *quantitative* element of the methodology that rating agencies use, which is objective and replicable, can be adapted to a regulatory setting to assess whether the allowances provided by a regulator are sufficient to maintain the benchmark credit rating assumed when setting those allowances.

74. This point was explained clearly by the Independent Pricing and Regulatory Tribunal (IPART) when it last reviewed its financeability tests:

> *To the extent that credit rating agencies' methodology overlaps with our purpose, that part of the methodology forms an important base for our test. As such, we have used credit rating agencies' methodology as a starting point and adapted it for our regulatory purpose.*
>
> *The purpose of the financeability test is not to assess or assign a credit rating for the business. Rather, it is to check whether our pricing decisions are likely to give rise to a financeability concern and to identify the reasons for any concern. For this reason, our analysis is quantitative only and does not include qualitative factors. In addition, our benchmark ratios are cash flow focussed, and are independent of the financing and investment decisions of the business.*[15]

CPA projects to be assessed on a standalone benchmark basis

75. The AEMC suggested during the financeability participant derogation rule change review that financeability tests should be conducted at the entity level rather than at the individual project level:

[14] AER, Rate of Return Instrument, Draft Explanatory Statement, June 2022, p. 23.

[15] IPART, p. 10.

The Commission agreed that a business, behaving rationally, would only undertake those projects that it believes will add value to its shareholders, and that under the existing regulatory framework it is possible for TNSPs to choose not to proceed with projects where those projects are not attractive, even where the entirety of the RAB, inclusive of those projects, is providing the TNSP with an opportunity to recover at least their efficient costs.

The Commission agreed with stakeholders who considered it important that ISP projects which add value for consumers are delivered in a timely manner. However, the Commission also agreed with stakeholders who noted that, consistent with the revenue and pricing principles, the network service provider as a whole should have an opportunity to recover at least their efficient costs and that, within their portfolio of RAB investments some assets may be attractive and some may not. The Commission therefore considered the correct test is at entity level, not project level.[16]

76. The AEMC appears to be suggesting that TNSPs should use cash flows generated by "attractive" projects to manage (essentially cross-subsidise) cash flow shortfalls or financeability problems associated with other less attractive projects. We disagree.

77. We propose that the regulatory financeability test should assess the financeability of the proposed project on a benchmark basis, as though it were a standalone investment, disregarding the broader circumstances or financeability of the firm undertaking the project.

78. We think this is appropriate because:

    a. This is precisely the basis on which the AER undertakes CPA revenue determinations. The AER seeks (correctly, in our view) to set revenue allowances by estimating the efficient, benchmark costs of such projects as if they were standalone investments. The AER does not seek to deliberately set revenue allowances for such projects below the efficient cost on the grounds that any shortfall could be met by surpluses generated by some other part of the business. The regulatory financeability test should be guided by exactly the same principle. A benchmark efficient business that had no access to sources of revenue beyond those set by the regulator in the CPA determination could not rely on such cash flows to address a financeability problem arising from an insufficient CPA revenue determination. Hence, the financeability test should be consistent and not have regard to any extraneous considerations outside the CPA determination.

    b. Commercial investment decisions for individual projects are made assuming that those projects are standalone. Rational firms do not make commercial investment decisions on the basis that streams of revenue from some projects would subsidise others.

79. It is feasible in practice to perform the regulatory financeability test for individual projects on a standalone basis because all the information required to do so (i.e., forecast benchmark revenues, costs, allowed returns, gearing and credit rating) are readily available in the PTRMs used by the AER when making CPA revenue determinations.

[16] AEMC, Participant derogation – Financeability of ISP projects (Transgrid), Rule Determination, April 2021, pp. 27-28.

Financial metrics and weights to be given to each metric

80. The financial metrics used in the financeability tests applied by regulators are typically drawn from the rating methodologies published by rating agencies. Of the three main rating agencies, the methodology published by Moody's is the most transparent and comprehensive. Therefore, many regulators use the Moody's methodology as the basis for their regulatory financeability test. We propose that the regulatory financeability test that is mandated in the NER should similarly be based on the rating methodology published by Moody's.

81. The rating methodologies (and the financial metrics used by rating agencies) varies by industry. The most applicable Moody's methodology for major transmission projects is Moody's global Rating Methodology for Regulated Electric and Gas Networks (the 'Moody's methodology').[17]

82. The key financial metrics used in the Moody's methodology for corporate debt issuers (as opposed to project-financed issuers) are summarised in **Table 1** below.

Table 1: Financial metrics and weightings considered by Moody's

Financial metric	Weighting in the Moody's methodology	Weighting if sole consideration given to financial metrics
Funds From Operations (FFO) Interest Coverage	10.00%	25.00%
Net debt/RAB	12.50%	31.25%
FFO/Net debt	12.50%	31.25%
Retained Cash Flow (RCF)/Net debt	5.00%	12.50%
Total	**40%**	**100%**

Source: Moody's, Regulated Electric and Gas Networks, Rating Methodology, 13 April 2022, Exhibit 2; Frontier Economics analysis.

83. The second column in the Table above shows that the four financial metrics considered by Moody's receive a combined weighting of 40% of all the rating factors considered in the Moody's methodology. If, instead, Moody's were to give *sole* consideration to the four metrics above (i.e., ignoring all the qualitative rating factors), then the proportional weights that would be assigned to each metric would be those presented in the third column of the Table above.

84. We propose that the regulatory financeability test adopts the four metrics specified in the Moody's methodology, and the weights in the third column of **Table 1**.

85. The regulatory financeability test we propose would involve the following steps:[18]

    a. Calculate each of the four financial metrics for the standalone benchmark project, for each year of the forthcoming regulatory period. The inputs required for these calculations would

[17] Moody's, *Regulated Electric and Gas Networks*, Rating Methodology, 13 April 2022.

[18] See Appendix A for a worked example of the proposed test.

be obtained entirely from the PTRM used by the AER set the CPA revenue allowances for the project. Hence, all of the cash flows and financial information used in the calculations would relate to a standalone benchmark efficient project, not the TNSP's actual business or any notional efficient activities beyond the standalone project being investigated.

b. For each metric and for each year, use the rating thresholds specified in the Moody's methodology (reproduced in **Table 3** below) to determine the implied credit rating of the standalone benchmark project.

c. Convert the implied rating for the benchmark business under each financial metric, for each year, to a numeric score between 1 to 18 using linear interpolation and the score mapping specified by Moody's reproduced in **Table 4** below. For instance, an FFO/Net debt ratio of 14.5% is equivalent to the midpoint of the Baa band in **Table 3**. This would be associated with a numeric score of 9 in **Table 4**.

d. Multiply the numeric scores for each metric derived in the previous step according to the weights in the third column of **Table 1** to determine an overall numeric score for the standalone benchmark project for each year. Note that the relative weights applied to each metric are adjusted if any metric pertains to a rating of Baa or lower. In this regard, Moody's notes that "We weight lower scores more heavily than higher scores in the scorecard because a serious weakness in one area often cannot be completely offset by strength in another."[19] This leads Moody's to increase the relative weights applied to any metric that pertains to a lower rating, as summarised in **Table 2** below. For example, if one metric pertained to a Ba rating and all others pertained to an A rating, the weight applied to that one metric would be doubled, and then the weights applied to all four metrics would be reduced pro rata such that they sum to 100%.

Table 2. Weightings modifiers under the Moody's methodology for electric and gas networks

Rating band	Weighting modifier
Aaa	1
Aa	1
A	1
Baa	1.15
Ba	2
B	3
Caa	5

Source: Moody's, Regulated Electric and Gas Networks, Rating Methodology, 13 April 2022, Exhibit 4.

e. Convert the weighted average numeric score for the benchmark business in each year to an overall credit rating using the mapping specified by Moody's reproduced below in **Table 5**.

[19] Moody's Investor Services, April 2022, Rating Methodology: Regulated gas and electric networks, p. 20.

i. If the implied credit rating for the benchmark project is at least as high as the benchmark credit rating used to set rate of return allowance, the conclusion from the test would be that the benchmark project would face no financeability concerns under AER's revenue allowances. This would be deemed a pass of the regulatory financeability test.

ii. If the implied credit rating for the benchmark project is lower than the benchmark credit rating used to set rate of return allowance, the conclusion from the test would be that the benchmark project would face financeability concerns under the AER's revenue allowances. This would be deemed a failure of the regulatory financeability test.

Table 3. Rating thresholds specified in the Moody's methodology

Rating band	FFO interest coverage	Net debt/RAB	FFO/Net debt	RCF/Net debt
Aaa	≥ 7.5x	< 30%	≥ 35%	≥ 30%
Aa	5.5x - 7.5x	30% - 45%	26% - 35%	21% - 30%
A	4.0x - 5.5x	45% - 60%	18% - 26%	14% - 21%
Baa	2.8x - 4.0x	60% - 75%	11% - 18%	7% - 14%
Ba	1.8x - 2.8x	75% - 90%	5% - 11%	1% - 7%
B	1.1x - 1.8x	90% - 100%	0% - 5%	(4%) - 1%
Caa	< 1.1x	≥ 100%	< 0%	< (4%)

Source: Moody's, Regulated Electric and Gas Networks, Rating Methodology, 13 April 2022, Exhibit 2.

Table 4. Moody's mapping of implied rating to numeric score

Rating band	Moody's numeric score
Aaa	1
Aa	3
A	6
Baa	9
Ba	12
B	15
Caa	18

Source: Moody's, Regulated Electric and Gas Networks, Rating Methodology, 13 April 2022, Exhibit 3.

Table 5. Moody's mapping of overall numeric score to overall credit rating

Moody's rating	Equivalent S&P rating	Overall numeric score
Aaa	AAA	x ≤ 1.5
Aa1	AA+	1.5 < x ≤ 2.5
Aa2	AA	2.5 < x ≤ 3.5
Aa3	AA-	3.5 < x ≤ 4.5
A1	A+	4.5 < x ≤ 5.5
A2	A	5.5 < x ≤ 6.5
A3	A-	6.5 < x ≤ 7.5
Baa1	BBB+	7.5 < x ≤ 8.5
Baa2	BBB	8.5 < x ≤ 9.5
Baa3	BBB-	9.5 < x ≤ 10.5
Ba1	BB+	10.5 < x ≤ 11.5
Ba2	BB	11.5 < x ≤ 12.5
Ba3	BB-	12.5 < x ≤ 13.5
B1	B+	13.5 < x ≤ 14.5
B2	B	14.5 < x ≤ 15.5
B3	B-	15.5 < x ≤ 16.5
Caa1	CCC+	16.5 < x ≤ 17.5
Caa2	CCC	17.5 < x ≤ 18.5
Caa3	CCC-	18.5 < x ≤ 19.5

Source: Moody's, Regulated Electric and Gas Networks, Rating Methodology, 13 April 2022, Exhibit 5.

86. This proposed approach differs from the usual approach used by regulators when implementing a regulatory financeability test. The conventional approach would involve:

    a. computing each of the financial metrics;

    b. comparing those computed metrics to the rating thresholds commensurate with the target credit rating (e.g., the threshold ratios consistent with a Baa1 rating); and

    c. using regulatory judgment to determine if a financeability problem is likely to exist.

87. One problem with this approach is that the overall outcome/rating of the financeability test may be ambiguous as the test would involve the assessment of multiple financial metrics at once. It is

common for businesses to 'pass' on some metrics (i.e., the computed metric exceeds the rating threshold) but 'fail' on others (i.e., the computed metric falls short of the rating threshold). It is therefore unclear whether, when considering the overall outcome/rating of the financeability test, a business has passed or failed. In such circumstances, the ensuing exercise of regulatory judgment over the outcome of the test may result in genuine financeability problems being overlooked.

88. As explained in section 2.4, it is essential to avoid the uncertainty associated with such discretion of regulatory judgment if TNSPs are to be incentivised properly to identify and pursue prudent, efficient and net-beneficial major transmission projects.

89. By contrast, under our proposed approach, an overall implied rating for the benchmark business would be derived using the same weighting scheme applied by Moody's to each of the key metrics. This would produce a single overall implied rating that would be used to determine unambiguously if the benchmark project has passed or failed the test. This would also approximate the way in which rating agencies assess the quantitative factors that inform their financeability tests.

3.4 Specification of a clear and mandatory remedy

90. If the regulatory financeability test is deemed to have been failed (see paragraph 85.e) in any individual year of a forthcoming regulatory period, then under our recommended approach the NER would mandate that the AER must (without discretion) adjust the revenue allowances by the minimum amount necessary to ensure that the regulatory financeability test is passed by the benchmark project in that year.

91. If the test is deemed to have been failed in more than one year of the forthcoming regulatory period, then the revenue allowances must be adjusted by the minimum amount necessary to ensure that the regulatory financeability test is passed by the benchmark project in all years.

92. Provided that the AER has set the rate of return allowance for the project in line with the minimum return required to compensate investors for the (non-diversifiable) risks they bear (see section 3.1), then the only reason a financeability problem would arise is if there is a temporary cash flow shortfall. The natural remedy for that problem is to reprofile (bring forward from future periods) revenues in an NPV-neutral way, for instance by accelerating the TNSP's depreciation allowance.

93. The Draft Report raises the prospect that it may be inappropriate in some circumstance (due to intergenerational equity concerns) for regulatory cash flows to be accelerated to address a financeability concern:

> *The Commission considers that cash flow should only be brought forward when the consumer benefits of more timely and efficient investment in infrastructure outweigh any negative impacts such as less efficient short-term prices and intergenerational inequity concerns. This will not be the case for all projects or all businesses and it should be noted that there are many factors that influence the benefits to consumers from specific assets over time. Indeed, we consider the benefits of shaped depreciation for specific assets will likely only be realised in exceptional circumstances.*[20]

[20] Draft Report, p. 16.

94. The Draft Report then proposes that for this reason the AER should be allowed to assess whether depreciation allowances should be accelerated on a case-by-case basis to support financeability.

95. For the reasons explained in section 2.4, we think that in order to provide investors with sufficient confidence that the regulatory framework is capable of identifying and adequately addressing genuine financeability problems, it is essential that the NER mandate a clear remedy for any financeability problem identified by a prescriptive test. In the absence of such an arrangement, investors could have no confidence at the outset of a CPA process that any financeability concerns created as a consequence of insufficient regulatory allowances would be resolved through regulatory action.

3.5 The AEMC's concerns about financeability tests

96. The Draft Report expresses a number of reservations about certain aspects of the design and implementation of financeability tests. We identify each of those concerns and address them below individually:

a. *The application of a regulatory financeability test for all CPAs would impose a disproportionate administrative burden on the AER and businesses in their proposals.*[21]

   We disagree. The regulatory financeability test that we have proposed would require no additional information to implement beyond what would already be available to the AER in the PTRMs it uses to make revenue determinations. This is because in the regulatory financeability test,

   i. the revenues of the benchmark project would be identical to the allowed revenues set using the PTRM;

   ii. the costs (e.g., operating expenditure, interest expenses, etc.) attributable to the benchmark project would be identical to the efficient costs determined by the AER in the PTRM for the purposes of setting the revenue allowance; and

   iii. the capital structure of the benchmark project would be identical to the capital structure assumed by the AER when setting the allowed rate of return.

   Furthermore, the regulatory financeability test that we have proposed is highly formulaic. This means that the test could readily be incorporated, using just a few additional rows of calculations, in the AER's existing PTRM. This would be a simple task to perform.

   Since the test could be integrated directly into the PTRM, the test could be performed automatically and as a matter of course whenever the inputs to the PTRM are updated. We note that many regulators have integrated regulatory financeability tests into their own versions of the AER's PTRM,[22] demonstrating that that the performance of such a test would be extremely simple and straightforward as part of any regulatory determination.

b. *It is unclear which financial metrics should be used as part of the regulatory financeability test. It may be inappropriate to rely on just one metric (such as the FFO/Net debt ratio).*[23]

   We agree that a regulatory financeability test should not be based on a single financial metric. We have proposed that the regulatory financeability test incorporate four key metrics

[21] Draft Report, p. 17.

[22] For example, IPART, ESCV, ESCOSA, Ofgem, Ofwat.

[23] Draft Report, pp. 17-18.

used by Moody's when it performs rating assessments of regulated electricity and gas networks. Hence, the test we have suggested does not suffer from the weakness of relying on a single financial metric to the exclusion of others that may also be relevant.

Moreover, we have proposed an approach (based on the same methodology used by Moody's) to weight and distil the information from these four metrics into a single overall credit rating for the benchmark business that may be compared to the benchmark rating.

c. *It is unclear how the thresholds for the metric(s) used in the financeability test should be selected.*[24]

We propose that the regulatory financeability test adopt the same thresholds used by Moody's in its rating methodology for regulated electricity and gas networks—as set out above. The thresholds used by Moody's (and other rating agencies) are not selected arbitrarily. Rather, Moody's defines those thresholds following its own empirical analysis of the financial metrics it observes for companies at different rating levels. Moody's reviews and updates these thresholds periodically in light of new empirical evidence and research.

97. The AEMC might also be concerned about the applicability of Moody's published rating methodology (which underpins our proposed financeability test) to regulated electricity networks in Australia. During the financeability participant derogation rule change review, the AEMC's adviser CEPA suggested that Moody's might not apply the rating thresholds presented in its published methodology when rating Australian energy networks.[25]

98. We understand that when conducting rating assessments, Moody's takes into account a wide range of qualitative, firm-specific factors that affect creditworthiness. Examples of these factors include:

a. the extent of financial support available from a parent company or via government ownership;

b. the firm's financial and debt management policy;

c. the extent of control that lenders are able to exert over the firm;

d. the extent to which the firm's activities are diversified into 'non-core' activities;

e. the firm's liquidity and access to capital markets;

f. the quality of the firm's management;

g. the size of the firm;

h. the firm's exposure to environmental, social and governance (ESG) risks;

i. the quality of the firm's financial reporting and internal financial controls;

j. the firm's exposure to unforeseen events (i.e., "event risk"); and

k. financing structure adopted by the firm.

99. Moody's might determine that a particular firm could support a particular credit rating with financial metrics that are weaker than those specified in its published methodology, because the firm is sufficiently strong on some or all of the factors above to compensate for that weakness. Conversely, Moody's might determine that a firm is so weak on some or all of the factors above that it could sustain a particular credit rating only if it were to achieve much stronger financial metrics than those specified in its published methodology. In other words, the precise thresholds

[24] Draft Report, p. 18.

[25] CEPA, Financeability of ISP Projects, 27 January 2021, p. 22.

that Moody's applies to individual firms depends on firm-specific circumstances, and can therefore differ from those laid out in the published methodology.

100. However, it is important to recognise that none of the qualitative considerations enumerated in paragraph 98 are relevant to a standalone benchmark transmission project. Therefore, none of those factors should influence the way in which a financeability test ought to be applied to a standalone benchmark transmission project. The fact that Moody's might apply different financial metric thresholds to those in its published methodology, when rating individual energy networks in Australia, is not relevant to the implementation of a regulatory financeability test for a standalone benchmark project.

101. Furthermore, even if it were the case that Moody's applies somewhat less onerous financial metric thresholds when rating Australian energy networks, it would not follow that the thresholds for passing a regulatory financeability test ought to be similarly lowered. The outcomes of selecting inappropriate rating thresholds for the regulatory financeability test are inherently asymmetric:

    a. Suppose the thresholds were set inadvertently such that the test was too difficult to pass. Then, there would be a tendency for the test to find financeability problems that in fact do not exist (i.e., a 'type I error' or 'false positive'), and the AER would be required to accelerate cost recovery when it was not necessary to do so. Consequently, consumers in the early years of the project would pay more than they ought to, and future generations of consumers would pay less than they ought to. However, the TNSP would never over-recover its efficient costs over the life of the project.

    b. By contrast, suppose the thresholds were set inadvertently such that the test was too easy to pass. In those circumstances, there would be a tendency for genuine financeability problems to go undetected (i.e., a 'type II error' or 'false negative'). Consequently, some efficient projects may be delayed or foregone completely, resulting in permanent harm to consumers.

102. Given the asymmetry of these outcomes, in our view it would be preferable to err in favour of a financeability test that may be prone to type I errors than one that is prone to type II errors.

A Illustrative example of the regulatory financeability test

103. In this section we provide a hypothetical example of a business that illustrates a financeability problem, and demonstrate how the modifications to the regulatory arrangements we have proposed in this report may ameliorate the problem.

Overview of example

104. We consider a new business that undergoes a 3-year construction period with no further capex, and with no opex.[26] The asset life is assumed to be 40 years upon commissioning of the asset.

105. As per the standard AER approach, the regulatory asset base grows at a forecast inflation rate, which we assume in this is 2.5%. There is no depreciation allowance during the construction period for the asset, so a negative regulatory depreciation allowance (after the deduction for expected indexation of the RAB) applies during the first 3 years. A return on capital does however apply to the opening regulatory asset base in years 2 and 3.

106. We assume that the cost of capital of the project during the construction phase is that of a construction project. However, the AER allows the firm to earn a BAU rate of return during the construction phase and post-commissioning of the asset, despite different risks and rates that may apply during that phase. In calculating gearing and interest expense for the purpose of deriving financeability metrics, we apply parameters applicable to construction projects.

107. We model the revenue allowances under the standard AER approach for the life of the asset, maintaining a constant rate of return and allowing outturn inflation to equal that forecast.

Financeability under standard AER approach

108. Under the standard AER approach we note that:

    a. Model cash flows and financial metrics mirroring the current arrangement;

    b. No construction rate of return is applied when calculating allowed revenues;

    c. No depreciation allowance is provided during asset construction; and

    d. No cashflow adjustments are made to address financeability problems.

109. In **Table 6** we present the financeability metrics for the asset over the construction period and the first regulatory period, excluding the first year. We see that the implied credit rating is typically well below the benchmark level of Baa1 or BBB+, and so the business fails the financeability test in each year.

[26] The financeability metrics used are neutral with respect to opex, provided that the opex allowance matches opex.

Table 6: Financeability under standard AER approach

Year	2	3	4	5	6	7	8
Metric							
ICR	1.00	1.00	3.09	3.13	3.16	3.21	3.25
Net debt / RAB	50%	50%	60%	60%	60%	60%	60%
FFO / Net debt	0.0%	0.0%	6.3%	6.4%	6.5%	6.6%	6.7%
RCF / Net Debt	-2.2%	-2.2%	4.5%	4.6%	4.7%	4.8%	4.9%
Overall	**Caa1**	**Caa1**	**Ba1**	**Ba1**	**Ba1**	**Ba1**	**Ba1**
Result	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**

Source: Frontier Economics analysis, Moody's methodology

Financeability improvements

110. We now make several alterations to the model that improve performance in financeability metrics. We first afford the asset an allowed rate of return that is in line with the construction cost of capital, when deriving the allowed return on assets during the construction period. The standard BAU rate of return is allowed once the asset has been commissioned.

111. As seen in **Table 7**, the application of the higher construction rate of return in years 2 and 3 improves three of the four metrics, resulting in a higher overall rating of B2 in years 2 and 3. However, performance in other years is not impacted, and the business still fails financeability in each year.

112. Next, we assume that the firm is provided with a return of capital (i.e., 'as incurred' depreciation) during the construction period. Since this brings forward some cash flows during the years in which construction is occurring, this improves the financeability of the project in years 2 and 3, as seen in **Table 8**. However, the business still fails financeability in each year.

113. Finally, we assume that the regulator makes a revenue adjustment to allow the business to pass financeability in each year in **Table 9**. This is performed in an NPV-neutral manner by adjusting the allowed depreciation applied in deriving the revenues and asset values. The increased revenues during the years in which depreciation is accelerated in **Table 9** result in lower allowed revenues in subsequent periods, when financeability will be improved by the reduced remaining asset life and therefore higher depreciation allowance relative to interest expenses.

Table 7: Financeability – apply construction rate of return

Year	2	3	4	5	6	7	8
Metric							
ICR	1.08	1.08	3.09	3.13	3.16	3.21	3.25
Net debt / RAB	50%	50%	60%	60%	60%	60%	60%
FFO / Net debt	0.5%	0.5%	6.3%	6.4%	6.5%	6.6%	6.7%
RCF / Net Debt	0.0%	0.0%	4.5%	4.6%	4.7%	4.8%	4.9%
Overall	**B2**	**B2**	**Ba1**	**Ba1**	**Ba1**	**Ba1**	**Ba1**
Result	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**

Source: Frontier Economics analysis, Moody's methodology

Table 8: Financeability – apply construction rate of return and allow depreciation during construction

Year	2	3	4	5	6	7	8
Metric							
ICR	1.89	1.91	3.09	3.13	3.16	3.21	3.25
Net debt / RAB	50%	50%	60%	60%	60%	60%	60%
FFO / Net debt	5.4%	5.5%	6.3%	6.4%	6.5%	6.6%	6.7%
RCF / Net Debt	4.9%	5.0%	4.5%	4.6%	4.7%	4.8%	4.9%
Overall	**Ba1**	**Ba1**	**Ba1**	**Ba1**	**Ba1**	**Ba1**	**Ba1**
Result	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**	**Fail**

Source: Frontier Economics analysis, Moody's methodology

Table 9: Financeability – apply construction rate of return, allow depreciation during construction and make NPV neutral revenue adjustments

Year	2	3	4	5	6	7	8
Metric							
ICR	4.03	4.01	5.51	5.50	5.52	5.50	5.52
Net debt / RAB	50%	50%	60%	60%	60%	60%	60%
FFO / Net debt	18.2%	18.1%	13.5%	13.5%	13.6%	13.5%	13.6%
RCF / Net Debt	6.2%	6.3%	5.2%	5.3%	5.4%	5.5%	5.6%
Overall	**A3**	**A3**	**Baa1**	**Baa1**	**Baa1**	**Baa1**	**Baa1**
Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Adjusted revenue	$149	$285	$341	$321	$303	$285	$270
Revenue - no adjustment	$58	$117	$182	$184	$186	$188	$190

Source: Frontier Economics analysis, Moody's methodology

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