RULE

Australian Energy Market Commission

DRAFT RULE DETERMINATION

NATIONAL ELECTRICITY AMENDMENT (PARTICIPANT DEROGATION – FINANCEABILITY OF ISP PROJECTS (TRANSGRID)) RULE 2021

PROPONENT

TransGrid

4 FEBRUARY 2021

INQUIRIES

Australian Energy Market Commission
GPO Box 2603
Sydney NSW 2000

E aemc@aemc.gov.au
T (02) 8296 7800

Reference: ERC0320

CITATION

AEMC, Participant derogation – financeability of ISP projects (TransGrid), Draft rule determination, 4 February 2021

ABOUT THE AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

SUMMARY

1 The Commission's draft determination

2 On 1 October 2020, the Australian Energy Market Commission (AEMC or Commission) received a rule change request from TransGrid. It sought an exception to the applicability of the rules in relation to the financeability of its share of actionable Integrated System Plan (ISP) projects in the form of a participant derogation, meaning that the exception from the rules will only apply to TransGrid. Financeability refers to the willingness of investors to extend equity or debt to a business to finance its activities.

3 In accordance with section 99 of the National Electricity Law (NEL), the Commission has made this draft rule determination in relation to TransGrid's proposed participant derogation. The Commission has determined not to make the proposed participant derogation.

4 Reasons for the Commission's draft determination

5 TransGrid claims that the rules create a barrier to obtaining finance for its share of ISP projects and requests that cash flows be brought forward by providing for a nominal rate of return on an unindexed RAB and allowing for depreciation as incurred.

6 The Commission recognises the importance of efficiently delivering ISP projects in a timely manner, consistent with meeting the National Electricity Objective (NEO). However, based on the AEMC's consultant's analysis and stakeholder feedback to the consultation paper and public forum, the Commission considers the regulatory framework does not create a barrier to financing TransGrid's current share of actionable ISP projects (including Project EnergyConnect) and the application of a different set of Rules to these — as well as TransGrid's share of future — actionable ISP projects is not warranted.

7 TransGrid earns a rate of return allowance every year through the maximum allowed revenue. The rate of return is a forecast of the cost of funds a network business requires to fund investment in its network. This rate of return allowance is determined with reference to a benchmark efficient entity. The concept of a 'benchmark efficient entity' is used by the AER to derive the rate of return (or WACC) for an efficient service provider. Overall, the benchmark efficient entity framework is intended to provide a long-term efficient return on capital. However, there is no expectation that a transmission network business, such as TransGrid, will adopt the benchmark efficient entity's capital structure – that is, the same distribution of debt and equity assumed by the AER to make up the finances of the benchmark efficient entity (currently assumed to be 60 per cent debt to 40 per cent equity).

8 Indeed, in a period of investment and expansion, it is likely that network businesses will need to rely more heavily on finance from equity investors relative to the benchmark assumption in order to maintain the benchmark credit rating. In less capital-intensive periods, revenues may support the benchmark credit rating under a structure more reliant on debt relative to the benchmark assumption. Changes to capital structure of this nature can be considered consistent with a competitive market, in which growth is typically financed by calls on equity and recovered over time. Actions that transmission network businesses, including TransGrid, can take to strengthen their credit profiles include raising equity and re-investing a higher

proportion of profits in the growth of the business. These options, which are outside the regulatory framework and which can help to finance new large capital-intensive projects, would be expected to be pursued by regulated entities like TNSPs.

9 More broadly, the Commission is not convinced that the making of this rule change request is the best option for providing the right incentives for TransGrid and other TNSPs to invest in ISP projects now and in the future. Making the rule proposed by TransGrid would likely substantially increase costs to consumers in the near to medium term. While lower prices attributable to the low short-run marginal cost generation connecting to the grid and easing of congestion at some locations may flow through later in the life of the relevant ISP projects, the intergenerational wealth transfer caused by the proposed changes to the rules is unlikely to be in the long-term interests of consumers, particularly given that current consumers would be paying for benefits enjoyed by future consumers. Options to support the timely and efficient delivery of large transmission projects that are in the long-term interests of consumers is a matter that will be explored by the AEMC further outside this rule change process.

10 In assessing the rule change request from TransGrid, the AEMC engaged CEPA to provide advice on the financeability of ISP projects. The first stage of CEPA's analysis considered whether there is a financeability issue. In the second stage, CEPA provided advice on how the AER and TNSPs could respond to an identified financeability concern. CEPA also considered the key impacts of the proposed rule on customers and investors, and the NEO more generally.

11 The Commission agrees with CEPA's finding that the regulatory framework does not create a barrier for ISP investments including PEC

12 In its rule change request, TransGrid asserts that cash flows from PEC (and many other ISP projects) will be insufficient to support 60 per cent debt funding at a BBB+ credit rating[1] (or indeed an investment grade credit rating at all) for an extended period. It argues that as a consequence, this may result in a higher cost of debt that what is suggested by the BBB+ credit rating and a TNSP may find it difficult to obtain finance that is consistent with the regulated rate of return. This claim was based on an analysis of one credit metric, the funds from operations divided by net debt ratio (FFO/net debt), and TransGrid's opinion on how a change in this metric will affect their overall credit rating. The FFO/net debt ratio is one of the measures used by credit rating agencies to assess the level of financial risk of debt funding.

13 However, the analysis prepared by CEPA for the Commission does not support this claim. As noted by CEPA, the proponent has argued for a substantial rule change based on the impact of their proposed investment programme of $9 to 10 billion over the next 10 years[2] on one credit metric - the FFO/ net debt ratio. In practice, rating agency assessments are more sophisticated, reflecting other financial credit metrics and a range of qualitative factors

1 A credit rating of BBB- (on the Standard and Poor's scale) or better is considered an 'investment grade' credit rating. TransGrid is rated by Moody's which uses a different terminology. A comparison between S&P's and Moody's terminology can be found in Appendix B.

2 TransGrid, rule change request, p. 9.

including the quality of the entirety of the regulatory framework.

14 CEPA's analysis shows that ISP investments are unlikely to prompt a rating downgrade to below investment grade for a business financed at the AER's notional gearing, given that businesses expected profile of ISP investments. By modelling the credit scoring framework used by rating agencies using the full range of different quantitative metrics and qualitative factors, CEPA's analysis shows that a notional TNSP would be able to maintain an investment grade rating with this assumed investment profile.

15 Further, while CEPA's analysis supports TransGrid's claim that performance against the FFO/Net Debt ratio would likely improve if the proposed rule was made, CEPA also shows that the notional entity with an investment profile consistent with TransGrid's share of ISP projects would be able to achieve a similar improvement in this ratio by using a gearing level of 55-58 per cent.

16 Based on this analysis, the Commission does not consider that the regulatory framework is creating a barrier to TransGrid financing its share of current actionable ISP projects. The Commission also notes CEPA's finding that the effect of the proposed rule on the ability of the notional entity to finance these projects is not likely to be material.

17 There are options available to TransGrid outside of the regulatory framework to help it manage financeability

18 In its rule change request, TransGrid also asserts that, under the current rules, there is limited scope for the AER to modify its approach to change revenue profiles to meet financeability concerns such as those identified. While CEPA's analysis concurs with this conclusion, CEPA also identifies actions that the notional entity could take outside of the regulatory framework to manage financeability. These include:

- options for alternative financial instruments, that could lower cash interest costs. This includes inflation linked bonds, or other financial instruments such as hybrid securities and notes.
- reducing the actual gearing below the notional level in order to improve financial ratios.

19 In its rule change request, TransGrid suggests that reducing its gearing would be unacceptable on the basis that it would be inconsistent with the design of the regulatory framework (specifically, the assumptions used to set the allowed rate of return).[3]

20 The Commission notes TransGrid's submission but as explained by the AER in its submission to the consultation paper, the purpose of the benchmark efficient entity gearing level is to estimate an allowed rate of return that is commensurate with the efficient financing costs of the regulatory investments.

21 Importantly, there is no obligation on TransGrid (or other network businesses) to adopt the capital structure assumed by the AER for the purposes of the rate of Return Instrument (RORI): in practice, TNSPs are free to choose a capital structure that suits their

3 TransGrid, rule change request, p. 15. In addition, in its submission to the consultation paper, TransGrid also states that "*...the regulatory framework needs to allow us to...Finance our functions in line with benchmark efficient entity gearing level". TransGrid, submission to the consultation paper, p. 3.*

circumstances over time.

BOX 1: THE EFFICIENT BENCHMARK AND ACTUAL FINANCING PRACTICES

Economic regulation of energy network assets is based on a hypothetical benchmark efficient firm. This approach ensures that network businesses have incentives to finance their business as efficiently as possible. This is important in the context of the revenue and pricing principles set out in the NEL. Under these principles, network businesses should, among other things, be afforded a reasonable opportunity to recover at least efficient costs. In addition, businesses should be provided with effective incentives in order to promote economic efficiency.

Businesses are incentivised to seek out economic efficiencies by being rewarded if they can achieve lower costs of equity and debt than assumed for the benchmark efficient entity and penalised if their cost of financing is higher than the regulated rate of return.

This also applies to the financing of assets. In particular, transmission network service providers are not required to use the efficient benchmark assumptions the AER uses to derive the regulated WACC. Indeed, they are incentivised to outperform the regulated WACC by being able to keep any efficiency gains they realise.

Source: AER, rate of return instrument, 2018.

22 Based on the analysis provided by CEPA, the Commission considers that it is reasonable to assume that both existing investors, and potential future investors, in Australian energy networks would expect gearing levels to temporarily fall below the notional level in the context of significant RAB growth. Further, CEPA pointed out that the market evidence does not support the proponent's argument that infrastructure in Australia cannot be financed under the current regulatory settings. To support this view, they noted that there is continued global demand from investors for high quality assets such as energy networks in Australia and there is recent evidence of debt and equity financing of TNSPs which anticipated ISP investment under the current regulatory arrangements.

23 Based on these findings, the Commission is satisfied there are options available to TransGrid outside the regulatory framework to manage financeability.

24 TransGrid's proposed derogation does not promote the long term interests of consumers

25 Based on current information, the Commission considers the regulatory framework does not create a barrier to financing TransGrid's current share of actionable ISP projects (including Project EnergyConnect).

26 Nevertheless, the Commission has assessed the proposed rule against the NEO to understand if the proponent's proposed solution to address potential financeability issues with ISP projects, should these arise in the future would be in the long term interests of consumers.

27 The Commission is not satisfied that the proposed participant derogation will, or is likely to, contribute to the achievement of the NEO. The Commissions reasons are as follows:

- **Risk allocation:** By applying depreciation as incurred and an unindexed RAB to TransGrid's share of current and future ISP projects, the proposed rule would transfer some risks — in particular, inflation risk and completion risk — from TransGrid to consumers who are not best placed to manage these risks.
- **Regulatory framework:** The proposed rule would represent a significant departure from established principles of regulation in Australia. It has the potential to undermine the AER's role in administrating the regulatory framework, introduce substantial regulatory uncertainty to TNSPs not covered by this rule change and distort the achievement of efficient outcomes in both the NEM and financial markets by tilting the playing field towards TransGrid and its ISP projects relative to other TNSPs and non-network providers.
- **Regulatory compliance and administration costs:** The proposed rule would significantly increase complexity in the application of the regulatory framework by both requiring the management of alternative classes of assets within the regulatory framework and ensuring the RORI appropriately applies for both nominal and real rates of return. The likely need to create a second RAB for TransGrid for its share of ISP projects to address these issues would also result in the AER incurring increased administrative costs.
- **Efficient operation of electricity services:** The proposed rule is unlikely to promote efficient operation of the power system relative to the current arrangements. Specifically, the depreciation component of the proposed rule could weaken incentives for TransGrid to deliver projects to time by providing it with income from a project prior to its completion. This is unlikely to be in the long-term interests of consumers.
- **Efficient investment in electricity services:** The economic regulatory framework currently already provides TransGrid with a reasonable opportunity to recover its efficient financing costs, and therefore currently supports efficient investment in electricity services. The application of the proposed changes to TransGrid's share of ISP projects only is likely be detrimental to efficient investment in electricity services by tilting the playing field towards TransGrid and away from other proponents and similar ISP projects, and weaken investment incentives on onshore and offshore equity investors seeking capital growth by removing the linkage to, and hence protection from, inflation. Removing the RAB indexation could also cause a financeability issue in the future as the value of the RAB stops being indexed by inflation every year.
- **Impact on consumers:** While being NPV neutral from TransGrid's perspective, the proposed rule would result in payments for TransGrid's share of ISP projects being weighted towards the early period of an asset's life, substantially increasing costs for consumers in the near to medium term, with lower prices later in the life of the asset. The proposed rule would also create an intergenerational wealth transfer between current and future customers, remove the link between the inflation component of network charges and the inflation component of the income of users of electricity and move away from the current alignment between the profile of revenues to TransGrid for its share of ISP projects with the timing of benefits to consumers in respect of these projects.

28 **The AEMC recommends a review of options to support the timely and efficient delivery of transmission projects**

29 Careful consideration of the information provided by the proponent, stakeholders and CEPA has informed the Commission's view that there is currently no barrier in the regulatory framework to TransGrid financing its share of actionable ISP projects, including PEC. In the absence of a regulatory barrier, the Commission has decided that TransGrid's rule change request does not warrant a change to the Rules.

30 The Commission considers, however, that the rule change request has raised some significant issues in respect of the ISP framework, in particular in relation to the timely and efficient delivery of large transmission projects (including current and future ISP projects) in the national electricity market (NEM).

31 For example, while the Commission considers there are options available to TransGrid under the current regulatory framework to help it manage financeability, the ultimate decision on whether to invest in a transmission project — including ISP projects — rests with transmission network service providers based on what is in the best interests of their shareholders.

32 Further, the Commission's assessment of TransGrid's rule change request is based on information at hand, including the expected pipeline of ISP projects, the current regulatory framework applied by the AER and the methodologies used by credit rating agencies to assess financeability. Given the uncertainty around future ISPs, jurisdictional initiatives to incentivise the creation of renewable energy zones and the AER's program of work to support the efficient and timely delivery of large transmission projects identified as actionable ISP projects, the Commission believes it is timely to consider a broader review of how the efficient and timely delivery of actionable ISP projects can be secured.

33 Before making any changes to the Rules to address potential issues in respect of the efficient and timely delivery of large transmission projects, it will be important to understand the causes of an issue. If the cause relates to matters that fall under the NEL or within jurisdictional regulatory instruments, a Rule change may not be the most, or the only, effective way to address the issue. An AEMC review will enable the Commission to consider a suite of possible measures and to recommend broader changes outside of the Rules framework, if necessary and appropriate.

34 For these reasons, the Commission intends to commence a broader review, together with the other market bodies, to consider options to support the timely and efficient delivery of large transmission projects that are in the long-term interests of consumers, recognising that the nature of transmission investment is invariably changing. The scope of the review will include matters such as financing, regulatory and governance issues.

35 **Background to TransGrid's rule change request**

36 TransGrid asserts that in the course of its assessment of PEC, it identified that there are features of the regulatory framework that have significant implications for the financeability of large- scale projects with long asset lives, such as PEC.

37 TransGrid considers that the financeability issue is due to the regulatory framework deferring revenue recovery for capital investment costs until later in the asset's life. Specifically, it considers that the deferral of revenue recovery under the current rules results in a long period early in a large asset life where the revenue allowance will fall substantially short of covering the efficient costs of financing the project during that period.

38 TransGrid claims that this mismatch creates a significant barrier to securing the capital necessary to finance the project, substantially undermines the incentive to invest and so risks denying consumers the benefits of the projects concerned.

39 To address this issue, TransGrid has proposed the removal of RAB indexation and a move to as incurred depreciation for its current, and future, share of actionable ISP projects. It considers that by removing RAB indexation and moving to depreciation as incurred it could, with prudent capital management, achieve an investment grade rating sufficiently early to overcome the barrier to securing the capital necessary to proceed with these projects.

40 Related rule change request

41 ElectraNet also submitted a rule change request in the form of a participant derogation seeking changes to the NER to bring forward cashflows in respect of its share of actionable ISP projects. The draft determination in relation to ElectraNet's rule change request was published on the same date as this determination and is available on the Commission's website.

42 The Commission invites public submissions on this draft rule determination

43 In accordance with the notice published under section 99 of the NEL, the Commission invites submissions on this draft rule determination by 18 March 2021.

44 In accordance with section 101(1a) of the NEL, any person or body may request that the Commission hold a hearing in relation to this draft rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 11 February 2021.

45 Submissions and requests for a hearing should quote project number "ERC0320" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission

PO Box A2449

SYDNEY SOUTH NSW 1235

46 Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.[4]

47 The Commission publishes all submissions on its website, subject to a claim of confidentiality.

48 All enquiries regarding this project should be addressed to Alex Oeser on (02) 8296 7800.

4 This guide is available on the AEMC website.

CONTENTS

TABLES

FIGURES

1 INTRODUCTION

On 1 October 2020, the Australian Energy Market Commission (AEMC or Commission) received a rule change request in the form of a participant derogation from TransGrid in relation to the financeability of its share of Integrated System Plan (ISP) projects.[5]

Specifically, TransGrid is seeking the following changes to the National Electricity Rules (NER or Rules):[6]

- remove indexation of the regulatory asset base (RAB), and
- require that depreciation be calculated on capital expenditure (capex) on an 'as incurred', as opposed to 'as commissioned', basis.

These changes would apply to TransGrid's share of ISP projects approved through the regulatory process (after the date of commencement of the rule) plus any actionable ISP projects for which TransGrid lodged a contingent project application with the AER after 1 September 2020 (but before the commencement date).

On 23 October 2020, the AEMC received a further rule change request (also in the form of a participant derogation) from ElectraNet in relation to the financeability of its ISP projects.[7] The draft rule determination for the ElectraNet rule change request can be found in a separate document specific to the ElectraNet rule change request.

The rule change request is available on the AEMC's website.[8]

TransGrid and ElectraNet requested that their rule change requests be expedited on the grounds that each proposed rule is an "urgent rule" under the National Electricity Law (NEL). Having considered both requests, the Commission did not consider that the rule change requests meet the test for an "urgent rule" in the NEL.

The timeframe for this rule change request is outlined in Table 1.1 below.

Table 1.1: **Key dates for TransGrid's rule change request**

MILESTONE	DATE
Draft rule determination	4 February 2021
Submissions on draft rule	18 March 2021
Final rule determination	8 April 2021

5 ISP projects are projects to augment the transmission system identified as part of the ISP prepared by the Australian Energy Market Operator (AEMO). The project code for this rule change request is ERC0320.

6 TransGrid, rule change request, pp. 6-7.

7 Project code ERC0322.

8 www.aemc.gov.au.

1.1 The rule change request

1.1.1 Issue the rule change request seeks to address

In its rule change request, TransGrid asserts that in the course of its assessment of PEC (as part of the Contingent Project Application (CPA) development), it identified features of the regulatory framework that have significant implications for the financeability of large scale projects with long asset lives, such as PEC.[9]

TransGrid considers that the financeability issue is due to the regulatory framework deferring revenue recovery for capital investment costs until later in the asset's life. Specifically, it considers that the deferral of revenue recovery under the current rules results in a long period early in a large asset's (like PEC) life where the revenue allowance will fall substantially short of covering the efficient costs of financing the project during that period. TransGrid claims that this mismatch creates a barrier to securing the capital necessary to finance the project and as a result, denies consumers the benefits of the projects concerned.

TransGrid notes that the regulatory returns set out in TransGrid's current determination and the 2018 Rate of Return Instrument (RORI) are intended to provide a revenue allowance to enable the recovery of efficient financing costs over the life of the asset. These include an assumption of 60 percent debt funding (a level of financial risk commensurate with a strong investment grade credit rating) and a return to equity investors assuming 40 percent equity funding.

However, TransGrid presents analysis which it claims confirms that cash flows from PEC (and many other ISP projects) will be insufficient to support 60 percent debt funding at a BBB+ credit rating (or indeed an investment grade credit rating at all) for an extended period. TransGrid considers that this has two implications:

- The project would require equity funding substantially in excess of the 40 percent ratio provided for in the revenue allowance, resulting in an uneconomic return to equity investors and lower than the equity returns to those set out in the AER's RORI (the return on additional equity would be at the regulated cost of debt), or
- The project could seek to proceed with 60 percent debt funding but this could only occur on a sub-investment grade ('junk') basis resulting in debt funding costs substantially in excess of those compensated for in the revenue allowance, causing serious adverse impacts to financial resilience increasing the risks borne by equity holders to significantly above the level contemplated in the AER's RORI. Further, the shortfall between compensated debt costs and those incurred at sub-investment grade would have to be borne by equity holders reducing returns to equity holders below those set out in AER's RORI.

TransGrid considers that these outcomes each create a significant barrier to securing the funding necessary to proceed with the project and substantially undermines the incentive to invest.

9 TransGrid's summary of the issue is provided in its rule change request, pp. 3-4.

1.1.2 Solution proposed in the rule change request

To address this issue, TransGrid has proposed two changes to the NER to remove indexation of the RAB and require that depreciation be calculated on capex on an 'as incurred', as opposed to 'as commissioned', basis.[10]

TransGrid considers that by making these changes it could, with prudent capital management, achieve an investment grade rating sufficiently early to overcome the barrier to securing the capital necessary to proceed with these projects.

The rule change request from TransGrid would apply to its share of transmission projects identified in the ISP as actionable now and in the future. The rule change request is in the form of a participant derogation from Chapter 6A of the NER.

TransGrid notes that, at this time, only it is being required to undertake investments the scale of PEC and HumeLink. It notes that if this issue were to arise for other TNSPs at some point in the future, a broader consideration of the issue would not be prejudiced in any way by its rule change request.

In practice, the proposed rule, if made, would have the effect of:

- requiring the AER to roll forward the RAB for the proponent's share of all actionable ISP projects undertaken by TransGrid now and in the future without indexation (this removes the need for the AER to make a subsequent negative inflation adjustment to prevent double compensation of inflation), and
- requiring the AER to calculate regulatory depreciation on an 'as incurred' basis rather than on an 'as commissioned' basis for proponent's share of the ISP projects now and in the future.

1.2 The rule making process

On 5 November 2020, the Commission published a notice advising of its commencement of the rule making process and consultation in respect of the rule change request.[11] A consultation paper identifying specific issues for consultation was also published. Submissions closed on 3 December 2020.

The Commission received 22 submissions as part of the first round of consultation.[12] The Commission has considered the issues raised by stakeholders in submissions and these issues are discussed and responded to in the relevant section of this draft rule determination.

1.3 Consultation on the draft rule determination

The Commission invites submissions on this draft rule determination by 18 March 2021.

10 TransGrid provides an overview of the proposed solution to the issue in its rule change request, pp. 6-7.

11 This notice was published under s.95 of the National Electricity Law (NEL).

12 Submissions are available on the AEMC website: www.aemc.gov.au.

Any person or body may request that the Commission hold a hearing in relation to the draft rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 11 February 2021.

Submissions and requests for a hearing should quote project number ERC0320 and may be lodged online at www.aemc.gov.au.

2 BACKGROUND

The Australian Energy Market Operator's (AEMO's) 2020 ISP proposes a suite of major projects designed to benefit consumers by reducing energy costs and improving system performance.[13] In New South Wales and South Australia, these projects include major investments in transmission infrastructure. These, and future, ISP projects are the subject of TransGrid's rule change request. The purpose of this chapter is to provide background relevant to the TransGrid rule change request. Specifically, this chapter describes:

- the ISP and what projects are covered under the rule change request, and
- the economic regulatory framework applied to transmission businesses and how financeability fits in.

2.1 The movement towards targeted transmission investment in the NEM

The Integrated System Plan prepared by AEMO is a whole-of-system plan that efficiently facilitates power system development, in the long-term interests of consumers of electricity. It serves a regulatory purpose by identifying actionable and future ISP projects, as well as a broader purpose of informing market participants, investors, policy decision makers and consumers of upcoming projects that may impact investment decisions.

The first ISP was prepared by AEMO and endorsed by the Council of Australian Governments (COAG) Energy Council in 2018.[14] It has since guided governments, industry and consumers on investments needed for an affordable, secure and reliable energy future while meeting prescribed emissions trajectories, and triggered the processes for actionable ISP projects. It is updated every two years and the latest version, the 2020 ISP, was released on 30 July 2020.[15]

Actionable ISP projects are projects that are critical to address cost, security and reliability issues, and are either already progressing or are to commence immediately after the publication of the 2020 ISP. For New South Wales, current actionable ISP projects include:[16]

- Victoria New South Wales Interconnector (VNI) minor. This is in progress and expected to be commissioned in later 2021.[17]
- Project EnergyConnect (PEC). The AER published its preliminary position on TransGrid's (and ElectraNet's) Contingent Project Applications in December 2020. The AER will

13 AEMO, 2020 Integrated system plan, July 2020.

14 On 29 May 2020, the Prime Minister announced the establishment of the National Federation Reform Council and the disbanding of COAG. New arrangements for the former COAG Energy Council will be finalised following the National Cabinet Review of COAG Councils and Ministerial Forums which will provide recommendations to National Cabinet. The Prime Minister has advised that, while this change is being implemented, former Councils may continue meeting as a Ministerial Forum to progress critical and/or well-developed work.

15 The 2020 ISP is available on AEMO's website: www.aemo.com.au.

16 AEMO, 2020 Integrated system plan, July 2020, pp. 14-15.

17 See: www.transgrid.com.au.

publish a decision once it is satisfied that TransGrid (and ElectraNet) have committed to proceed with the project.[18] The current cost estimate is $2.4 billion. For the New South Wales section of PEC, TransGrid's investment expected to be $1.94 billion.

- HumeLink. A Project Assessment Conclusions Report (PACR) is expected in June-July 2021. Final regulatory approval is expected early 2024 with HumeLink in place in mid 2026.[19]
- Central West Orana REZ transmission link. Construction expected to start by the end of 2022.[20]
- VNI West. A Project Assessment Draft Report (PADR) is expected in March 2021 and delivery by 2027–28.[22]

TransGrid estimates the total investment required to deliver its share of ISP projects to be between $9 to 10 billion over the next ten years.[23]

The proposed participant derogation by TransGrid would capture actionable ISP projects identified in the 2020 ISP for which a contingent project application process has not been commenced or completed by the AER (as at the dates of the AEMC receiving this request), as well as any actionable ISP projects identified for New South Wales in future ISPs.

2.2 The economic regulatory framework is designed to achieve efficient outcomes for consumers

This section briefly explains the design of the economic regulatory framework for TNSPs and then discusses how financeability fits within this framework.

2.2.1 Design of economic regulatory framework

Transmission network service provides (TNSPs) are regulated by the Australian Energy Regulator (AER). Under the current economic regulatory framework for transmission set out in Chapter 6A of the NER, the AER sets TNSPs maximum annual revenue (MAR) with reference to the costs that an efficient firm would incur in building and running its transmission network.[24]

The economic regulatory framework for transmission is designed to allow for a return commensurate with the regulatory and commercial risks involved in providing a direct control network service[25] with reference to a hypothetical efficient firm. The framework does not consider actual businesses, including their capital structure, actual debt costs or profitability.

18 AER, Preliminary Position, TransGrid Contingent Project, Project EnergyConnect, December 2020.

19 See: www.transgrid.com.au.

20

22 See: www.transgrid.com.au.

23 TransGrid, rule change request, p. 9.

24 The rate of return instrument is set outside of Chapter 6A, pursuant to Part 3, Division 1B of the NEL. The AER may make an instrument only if satisfied the instrument will, or is most likely to, contribute to the achievement of the national electricity objective to the greatest degree. In making an instrument, the AER must have regard to the revenue and pricing principles.

25 NEL, sections 2B and 7A(5).

Similarly, the determination of the maximum allowed revenue (MAR) does not consider individual investments in isolation but is concerned with the total asset base — that is, the regulatory asset base (RAB).

The regulated revenue stream is derived using a 'building block' assessment, where total revenue is the sum of four components (building blocks):

- return on capital (to compensate investors for the opportunity cost of funds invested in the business)
- return of capital (depreciation, to return the initial investment to investors over time)
- operating expenditure (opex) (to cover the day-to-day costs of maintaining the network and running the business), and
- cost of corporate taxation.

This regulatory framework aims to provide incentives for TNSPs to run efficient businesses and ensures consumers pay no more than necessary for safe and reliable services. It also ensures that consumers only pay what is necessary for the provision of services they receive.

In the current regulatory framework, depreciation is recovered by a TNSP when an asset is commissioned and not when the capital expenditure to build an asset is incurred. In other words, the framework ensures financial capital maintenance and provides that costs are recovered from the time customers start to accrue the benefits of the services delivered by the assets.

The current economic regulatory framework hence targets a real rate of return on an inflation indexed RAB over a regulatory period. This ensures that the purchasing power of the target return is not eroded by inflation and remains constant. If the nominal rate of return is targeted, then the purchasing power of these returns is eroded by actual inflation over the period.

Once regulated revenue is set for a period, TNSPs have an incentive to provide services at the lowest possible cost because their returns are determined by the actual costs of providing services. If a TNSP reduces its costs to below the regulatory estimate of efficient costs, the TNSP retains a share of the savings in future regulatory periods. This benchmark incentive framework is embedded in the building block allowances specified under the NER.[26]

2.2.2 Making investments financeable

Financeability refers to the willingness of investors to extend equity or debt to a business to finance its activities. This includes day-to-day operations and capital investments to replace, renew and expand the infrastructure required for these activities.

The term financeability is not used in the NEL. However, financeability issues could potentially impact achievement of the National Electricity Objective (NEO) or the associated revenue and pricing principles (RPP).[27]

26 AER, Regulatory treatment of inflation: discussion paper, May 2020.

27 Financeability is recognised in some other jurisdictions. In England, Wales and Scotland the Gas and Electricity Markets Authority (GEMA) must have regard to the need to secure that licence holders are able to finance the activities which are subject of obligations imposed - United Kingdom, Electricity Act 1989, Part 1, section 3A(2).

3 DRAFT RULE DETERMINATION

3.1 The Commission's draft rule determination

The Commission's draft rule determination is to not make the proposed rule.

The Commission has given careful consideration to the rule change request proposed by TransGrid. The Commission recognises the importance of efficiently delivering ISP projects in a timely manner, consistent with meeting the NEO.

However, based on the Commission's consideration, including of consultant analysis and stakeholder feedback to the consultation paper and public forum, the Commission considers the regulatory framework does not create a barrier to financing TransGrid's current share of actionable ISP projects (including Project EnergyConnect) and the application of a different set of Rules to these — as well as TransGrid's share of future — actionable ISP projects is not warranted.

The Commission agrees with TransGrid and other stakeholders who consider it important that ISP projects which add value for consumers are delivered in a timely manner. However, the decision about whether to invest in a specific project remains a business specific decision, based on the interests of its owners, rather than value added to consumers. Under the existing regulatory framework, it is possible for a business to choose not to proceed with a project even where the economic regulatory framework provides that business as a whole with an opportunity to recover at least its efficient costs.

The Commission is not convinced that the making of this rule change request is the best option for providing the right incentives for TransGrid or other TNSPs to invest in individual projects now and in the future.

More broadly, options to support the timely and efficient delivery of large transmission projects that are in the long term interests of consumers is a matter that will be explored by the AEMC further outside this rule change process.

The Commission's reasons for making this draft determination are set out in section 3.4.

This chapter outlines:

- the rule making test for changes to the NER
- the assessment framework for considering the rule change request
- the Commission's approach to assessing the rule change request
- the Commission's consideration of the proposed rule against the national electricity objective

Further information on the legal requirements for making this draft rule determination is set out in Appendix A.

3.2 Rule making test

3.2.1 Achieving the NEO

Under the NEL, the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).[28] This is the decision-making framework that the Commission must apply.

The NEO is:[29]

> 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:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system.

The Commission considers that the most relevant aspects of the NEO are the efficient investment in, and operation of, electricity services with respect to the price of electricity and the reliability and security of the national electricity system.

3.3 Assessment framework

In assessing the rule change request against the NEO, the Commission has considered the following matters:

- **Impact on risk allocation:** Risks should be borne by, or allocated to, parties who are in the best position to manage them and have the incentives to do so. This ultimately leads to lower costs for consumers. The Commission has therefore considered the potential for each of the two components of the proposed rule to transfer risk (for example, inflation risk) between different parties (for example, TransGrid and consumers) and whether this allocation of risk is likely to result in efficient outcomes.
- **Impact on the regulatory framework:** Future network investments in the NEM are financed in accordance with the post-tax revenue model. This model has several characteristics: it spreads costs of providing services to the time consumers use the services; and provides a risk adjusted rate of return over time set in the RORI for network service providers. These characteristics (or principles) have been a key feature of regulation in Australia developed over the last twenty or more years. In assessing TransGrid's proposed participant derogation, the Commission has therefore considered the impact of the proposed changes on the regulatory framework, including the implications of having different regulatory frameworks and principles apply to different transmission assets in selected NEM regions. The Commission has also considered the implications of the proposed participant derogation on the governance framework in the NEM.
- **Impact on regulatory compliance and administration costs:** In its submission to the consultation paper, the AER suggested the explicit consideration of regulatory

28 Section 88 of the NEL.

29 Section 7 of the NEL.

compliance and administration costs. The Commission has therefore considered the impact of the proposed changes on complexity of the economic regulatory framework and the regulatory compliance and administration costs incurred by the AER in applying the economic regulatory framework.

- **Impact on efficient operation in electricity services:** Timely investment in transmission projects that improve reliability and security in the NEM will support the efficient operation of the power system for the benefit of consumers. The Commission therefore notes the importance of ensuring that the economic regulatory framework does not create barriers to TNSPs delivering investments (including ISP projects) in a timely manner so that consumer benefits are not lost or deferred. In this context, the Commission has considered the impact of the proposed changes to the regulatory framework on the incentives for TransGrid to complete its share of ISP projects on time.
- **Impact on efficient investment in electricity services:** The regulatory framework is intended to provide TNSPs with a reasonable opportunity to recover at least their efficient costs of providing services. This is intended to allow these businesses to attract sufficient funds for investment, while not receiving a higher return than a firm operating in the same industry and facing similar risks would face in a competitive market. TNSPs also face various incentives to make efficient and timely investment decisions, within the constraints of investor preferences. In this context, the Commission has considered: whether there is an issue with the regulatory framework which means that TransGrid is not currently being provided with a reasonable opportunity to recover its efficient financing costs; and whether the changes to the regulatory framework proposed by TransGrid would better promote efficient investment relative to current arrangements. When considering whether TransGrid is able to recover its efficient costs, the Commission has had regard to the revenue and pricing principles set out in section 7A of the NEL.
- **Impact on consumers:** The Commission has considered whether there are likely to be benefits to consumers from making the proposed participant derogation and applying a different set of regulatory arrangements to TransGrid's share of current and future actionable ISP projects, relative to the status quo.

3.4 Approach to the assessment

Based on its own analysis, advice from consultants and information provided in submissions to the consultation paper and public forum, the Commission is not satisfied that TransGrid's rule change request will, or is likely to, contribute to the achievement of the national electricity objective. This is because the Commission considers the regulatory framework does not create a barrier to TransGrid financing its share of actionable ISP projects (currently PEC). The application of a different set of Rules to PEC — as well as TransGrid's share of future actionable ISP projects — is not warranted.

Nevertheless, the Commission has assessed the proposed rule against the NEO to understand the potential impact of the proposed changes on the long term interests of consumers and therefore the suitability of the proposed solution to address financeability of ISP projects, should an issue arise in the future.

Having regard to the issues raised in the rule change request and during consultation, the Commission is not satisfied that the form of the proposed participant derogation will, or is likely to, contribute to the achievement of the NEO relative to the current arrangements, for the following reasons:

- **Risk allocation:** By applying depreciation as incurred and an unindexed RAB to TransGrid's share of current and future ISP projects, the proposed rule would transfer some risks — in particular, inflation risk and completion risk — from TransGrid to consumers who are not best placed to manage these risks. Specifically, removing RAB indexation would have the effect of exposing consumers to inflation risk which, under current arrangements, they are currently protected from. In addition, a move to as incurred depreciation may also weaken incentives for TransGrid to complete its ISP projects in a timely and efficient fashion, thereby transferring the 'completion risk' associated with these projects from the business to consumers who are not in a position to be able to manage this risk.
- **Regulatory framework:** The proposed rule would represent a significant departure from established principles of regulation in Australia. It has the potential to undermine the AER's role in administrating the regulatory framework, introduce substantial regulatory uncertainty to TNSPs not covered by this rule change and distort the achievement of efficient outcomes in both the NEM and financial markets by tilting the playing field towards TransGrid and its ISP projects relative to other TNSPs and non-network providers.
- **Regulatory compliance and administration costs:** The proposed rule would significantly increase complexity in the application of the regulatory framework by both requiring the management of alternative classes of assets within the regulatory framework and ensuring the RORI instrument appropriately applies for both nominal and real rates of return. The likely need to create a second RAB for TransGrid for its share of ISP projects would also make scrutiny of capital expenditure efficiency and prudency more complicated and result in the AER incurring increased administrative costs which, in the absence of a problem, are unlikely to result in efficient outcomes for consumers.
- **Efficient operation of electricity services:** The proposed rule is unlikely to promote efficient operation of the power system relative to the current arrangements. Specifically, the depreciation component of the proposed rule could weaken incentives for TransGrid to deliver projects to time by providing it with more income prior to completion of a project. This is unlikely to be in the long-term interests of consumers.
- **Efficient investment in electricity services**: The proposed rule is unlikely to promote efficient investment in electricity services relative to the current arrangements on the basis that economic regulatory framework currently already provides TransGrid with a reasonable opportunity to recover at least its efficient financing costs. Importantly, there is no obligation on TransGrid (or other NSPs) to finance investments at the notional gearing, whatever the profile of their capital expenditure: rather, the current regulatory framework provides TNSPs with sufficient flexibility to adapt their capital structures to be able to raise debt finance consistent with the benchmark efficient firm. The application of the proposed changes to TransGrid's share of ISP projects only is likely be detrimental to

efficient investment in electricity services by tilting the playing field towards TransGrid's ISP projects and away from other proponents and similar ISP projects, and weaken investment incentives on onshore and offshore equity investors seeking capital growth by removing the linkage to, and hence protection from, inflation. Removing the RAB indexation could also cause a financeability issue in the future as the value of the RAB stops being indexed by inflation every year.

- **Impact on consumers:** While being NPV neutral from TransGrid's perspective, the proposed rule would result in payments for TransGrid's share of ISP projects being weighted towards the early period of an asset's life, substantially increasing costs for consumers in the near to medium term, with lower prices later in the life of the asset. The proposed rule would also create an intergenerational wealth transfer between current and future customers, remove the link between the inflation component of network charges and the inflation component of the income of users of electricity, and move away from the current alignment between the profile of revenues to TransGrid for its share of ISP projects with the timing of benefits to consumers in respect of these projects.

The reasons for the Commission's draft decision are discussed in detail in Chapter 6 of this draft rule determination.

3.5 Strategic priority

This rule change request is relevant to the Commission's strategic priority relating to market and network arrangements that encourage efficient investment and flexibility.

The current regulatory arrangements which TransGrid is seeking to change in respect of its share of current and future actionable ISP projects currently provide for TransGrid to recover its efficient costs, which consequently encourages efficient investment.

As noted above and explained further in this draft rule determination, the Commission does not consider that making the proposed rule would promote efficient investment in electricity services relative to the status quo, and could in fact be detrimental to efficient investment.

3.6 Other requirements under the NEL

In applying the rule making test,[30] the Commission has also taken into account the revenue and pricing principles in the NEL[31] when considering whether to accept the rule change request.

The revenue and pricing principles require that a regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing direct control network services and complying with a regulatory obligation or requirement or making a regulatory payment.[32]

30 Set out in section 88 of the NEL.

31 The revenue and pricing principles are set out in section 7A of the NEL.

32 Set out in section 7A(2) of the NEL.

The revenue and pricing principles also require that a regulated network service provider should be provided with effective incentives in order to promote economic efficiency with respect to direct control network services the operator provides. The economic efficiency that should be promoted includes:

(a) efficient investment in a distribution system or transmission system with which the operator provides direct control network services; and

(b) the efficient provision of electricity network services; and

(c) the efficient use of the distribution system or transmission system with which the operator provides direct control network services.[33]

The revenue and pricing principles further require that:

- A price or charge for the provision of a direct control network service should allow for a return commensurate with the regulatory and commercial risks involved in providing the direct control network service to which that price or charge relates.[34]
- Regard should be had to the economic costs and risks of the potential for under and over investment by a regulated network service provider.[35]
- Regard should be had to the economic costs and risks of the potential for under and over utilisation of a transmission system.[36]

The Commission's analysis indicates that the current arrangements are consistent with these principles. In particular, the revenue and pricing principles, together with the rate of return objective,[37] do not require the regulatory framework to ensure that a TNSP can achieve a particular investment profile at the notional gearing and/or credit rating of a benchmark efficient entity.

In addition, and in response to the proponents who considered not making the derogation would risk underinvestment in the network, the Commission does not consider implementation of the proposed changes would promote efficient investment relative to the current arrangements.

33 Clause 7A(3) of the NEL.

34 Clause 7A(5) of the NEL.

35 Clause 7A(6) of the NEL.

36 Clause 7A(7) of the NEL.

37 Clauses 6.5.2(c) and 6A.6.2(c) of the NER specify that the allowed rate of return objective is that the rate of return for a service provider is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the service provider in respect of the provision of standard control services.

4 DOES THE REGULATORY FRAMEWORK CREATE A BARRIER FOR THE FINANCING OF ISP PROJECTS?

Overall, the Commission found that the regulatory framework does not create a barrier to the proponent being able to secure finance for its share of actionable ISP projects.

In coming to this conclusion, the Commission assessed the information provided by the proponent and by stakeholders through submissions to the consultation paper and at a public forum. AEMC staff also undertook targeted consultation including with the AER, Moody's, capital market specialists and consumer representatives.

The Commission engaged Cambridge Economic Policy Associates to undertake a comprehensive analysis of impacts on the proponent's financeability in undertaking Project EnergyConnect and other future ISP projects. A copy of CEPA's report is published alongside this report and available on the AEMC's website.[38]

This chapter outlines:

- what the proponent considers to be the issue relating to the financeability of ISP assets
- what information the proponent provided to the Commission to substantiate the issue
- CEPA's independent analysis of the financeability impacts of ISP projects
- further considerations on the financeability of individual ISP projects, and
- the Commission's view on the financeability of future ISP projects.

4.1 Proponent's view as to why its share of ISP projects are not financeable

The proponent suggests that in the course of its assessment of PEC, it has identified that there are features of the current economic regulatory framework that have significant implications for the financeability of ISP projects.[39] They say the issue has emerged due to the unprecedented capital investment required in order to deliver the proponent's share of ISP projects.

The proponent suggests that the financeability issue arises due to the regulatory framework deferring revenue until later in the asset's life. The proponents say that this deferral arises from the following two design features of the regulatory framework:[40]

- the provision of compensation for inflation through consumer price index (CPI) indexation of the RAB, which involves a deduction of forecast CPI indexation from the revenue calculation (capitalisation of inflation), and
- recovery of revenue for depreciation commencing when projects are commissioned.

38 www.aemc.gov.au.

39 TransGrid, rule change request, p. 3.

40 TransGrid, rule change request, p. 10

The proponent says that the revenue allowance in its revenue determination and the 2018 RORI assume a 60% debt funding level, a level of risk commensurate with strong investment grade credit rating and a return to investors assuming a 40% equity funding.

According to the proponent, this has two implications that substantially undermine the incentive to invest in the PEC:

- the project would require equity funding substantially in excess of the 40% ratio provided for in the revenue allowance, resulting in an uneconomic return to equity investors and lower than the equity returns to those set out in the RORI) or
- the project could seek to proceed with 60% debt funding but this could only occur on a sub-investment grade basis resulting in debt funding costs substantially in excess of those compensated for in the revenue allowance.

According to the proponent:[41]

> Our credit rating would fall further (to well below investment grade) if we invested in more ISP projects. The downgrade in credit rating would result in a cost of debt well above that assumed to be faced by a benchmark efficient entity with a BBB+ credit rating, and will impact our ability to attract capital due to the increased risk associated with these projects. It is critically important for TNSPs to maintain investment metrics for stability and continuity. The ability to raise debt is critical and those same investment grade metrics also give equity markets confidence. The negative impacts of an investment downgrade are substantial and include transaction costs, managerial distraction, ability to maintain reliable operations, and decline of the firm. Expansionary activities are simply implausible until the firm stabilises.

4.1.1 Rule change request

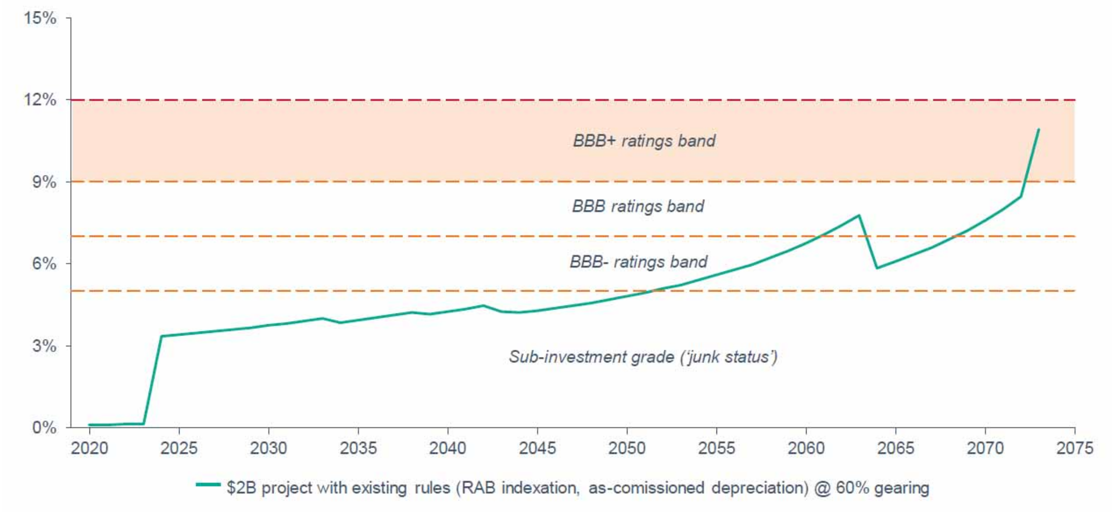
The rule change request contains analysis that, according to the proponent, indicates that the cash flows from PEC (and many other ISP projects) will be insufficient to support 60 per cent debt funding at a BBB+ credit rating (or indeed an investment grade credit rating at all) for an extended period.

The proponent's analysis is based on the funds from operations over net debt credit metric (FFO/Net Debt) that is one of the measures used by credit rating agencies to assess the level of financial risk of debt funding.

Figure 4.1 shows the revenue profile of a notional standalone $2 billion project under the current economic regulatory framework and the predicted credit rating based on the proponent's assessment of the FFO/net debt financial metric

41 TransGrid, rule change request, p. 16.

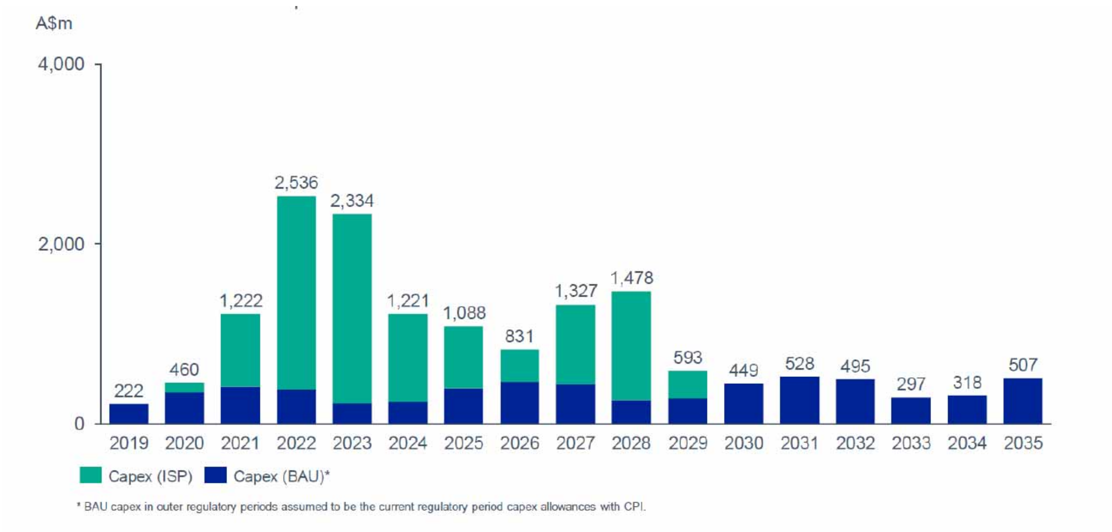
Figure 4.1: FFO/Net debt - Illustrative 2bn project



Source: TransGrid, rule change request, 30 September 2020, p. 15.

The proponent also claims that it faces significant capital expenditure as a result of AEMO's ISP, as compared to business as usual (BAU). Figure 4.2 compares the proponent's expected BAU and ISP related capital expenditure until 2035.[42]

Figure 4.2: Forecast ISP and BAU capex



Source: TransGrid, rule change request, 30 September 2020, p. 10.

42 TransGrid, rule change request, p. 10.

The proponent claims that financing its share of ISP projects is likely to require investments between $9 to $10 billion over the next ten years.[43] Noting the proponent's current RAB of approximately $6.4 billion, this would represent more than a doubling of its RAB.

The proponent notes that the consumer savings from ISP investments across the NEM are expected to be around $11 billion over the next 20 years.[44] The 2020 ISP states that this benefit is the product of the least-cost development path to secure a full range of competitive energy resources.[45]

4.1.2 Proponent's submission to consultation paper

Financeability of ISP projects

In its submission to the consultation paper, TransGrid reiterated that the rule change request had been triggered by the materiality of the capital investment required for the ISP projects. According to TransGrid, both the size of investment and the deferral of the recovery of revenue to the latter years of its remaining life have a material impact on their ability to finance the ISP projects within the benchmark requirements of the NER.[46] The proponent claims that its rule change request seeks to alter the revenue profile of the ISP projects to support the financeability of these projects, not to change their profitability.[47]

TransGrid submitted that their investors expect returns consistent with the regulatory benchmark:[48]

> The clienteles of investors that are attracted to regulated energy networks have strong expectations that regulated returns will be available and consistent with the regulators estimate of efficient costs, including gearing levels and credit ratings that are assumed as regulatory benchmark. The substantially more back ended cash flow for the ISP projects means that such a gearing level cannot be maintained whilst also maintaining a prudent, strong investment grade credit rating, and so the character of the cash flows places a constraint on meeting the expectations of these investors.

TransGrid further claims that:[49]

> A TNSP should expect to be able to achieve the credit rating determined to be efficient for a regulated network service provider (in this case BBB+). The ability of a TNSP to do so should not rest on, or require, the profitability or leveraging of capital of its unregulated activities or reliance on concessional government financing initiatives.
>
> If we proceed with PEC (and other ISP projects) under the current NER, we will cease to be capable of satisfying the requirements of the entity conceptualised by the AER

43 TransGrid, rule change request, p. 9.
44 TransGrid, rule change request, p. 27.
45 AEMO, ISP 2020, July 2020, pp. 96-97.
46 TransGrid, submission to the consultation paper, p. 8.
47 TransGrid, submission to the consultation paper, p. 6.
48 TransGrid, submission to the consultation paper, p. 13.
49 TransGrid, submission to the consultation paper, pp 3-4.

> when setting the rate of return. That is, we will cease to be able to earn the rate of return as determined for the benchmark efficient entity by the AER. This is not because of factors that are within our control, that is, this is not caused by a failure by us to be efficient. Rather, it is because of the delayed recovery of revenue under the current NER and PTRM.

After working closely with the AER and other stakeholders to find an alternative solution, the proponent said that it concluded that the financeability issue is unable to be resolved within the existing regulatory framework and a rule change is the most efficient solution.[50]

FFO/net debt

To illustrate the importance of the FFO/net debt metric in the credit rating assessment, TransGrid submitted that:[51]

> FFO/Net Debt for a benchmark efficient entity is entirely driven by the regulatory framework (a network service provider cannot independently change the regulated returns, revenue, profile of revenue, RAB or RAB debt). Therefore, this demonstrates the challenge we are facing within the regulatory framework when considering the investment decision for our share of the ISP projects. An example to highlight our concern is the recent credit rating downgrade for ElectraNet which demonstrates:
>
> 1. The willingness of credit rating agencies to downgrade TNSPs, and
>
> 2. The credit rating agencies' focus on cash flow metrics as a key determinant of a credit rating upgrade or downgrade, in particular FFO/Net Debt and Net Debt/RAB.

RAB multiples

Finally, in response to the question of why a transmission business may change hands for an implied enterprise value to RAB ratio of greater than one TransGrid responded that:[52]

> RAB multiples implied by transactions outcomes reflect a wide range of factors. The existence of RAB multiples above one is not an indicator of the financeability required for the actionable ISP projects. There are two key reasons for this which are outlined below. First, the price paid includes the value of both the 'regulated' business and the 'contestable' business, as well as expected benefits that are factored in by the purchaser such as efficiency gains and future investment opportunities. Secondly, a RAB multiple above one paid in a transaction does not mean that investment funds can be attracted in future activities, particularly where the financial characteristics of those activities are materially different to the RAB activities. Corporate finance tells us investment decisions are efficiently made by an assessment of the future cash flows and risks of the project, not past decisions.

50 TransGrid, submission to the consultation paper, p. 13.

51 TransGrid, submission to the consultation paper, p. 5.

52 TransGrid, submission to the consultation paper, p. 12.

4.2 Observations on other matters raised by the proponent

4.2.1 Stakeholder observations

Stakeholder views on whether ISP projects are financeable under the current regulatory framework

In general, stakeholders recognised the unprecedented size of actionable ISP projects. However, views were split on whether these projects are financeable under the current regulatory framework.

Of those stakeholders that considered that ISP projects are financeable, common views expressed included that:

- financing challenges TNSPs face on large investments are not unique and are faced by other firms with revenue streams increasing with inflation, for example through long term contracts or regulation,[53]
- much of the case rests on presentation of the indicative financeability of a standalone "notional project" which is meaningless in the context of the financeability of a regulated network, which is the matter under consideration,[54] and
- the low risk regulated returns available for network investment would be considered attractive to both TNSPs and providers of finance, particularly given current low interest rates.[55]

Stakeholders also pointed out that while the existing economic regulatory framework does include a delay between when network expenditure is incurred and when revenue is received, this is by design.[56] For example, AGL submitted that:[57]

> It is normal in most markets that revenue does not flow until benefits are received, and it is necessary for network investment since it best ensures that those that pay for network expenditure are the same customers who receive the benefit of the expenditure. This is particularly important for network investments where more value is typically received later in the project life. The requested rule changes are likely to lead to a temporal misallocation of costs to consumers and will therefore lead to inequitable outcomes for consumers.

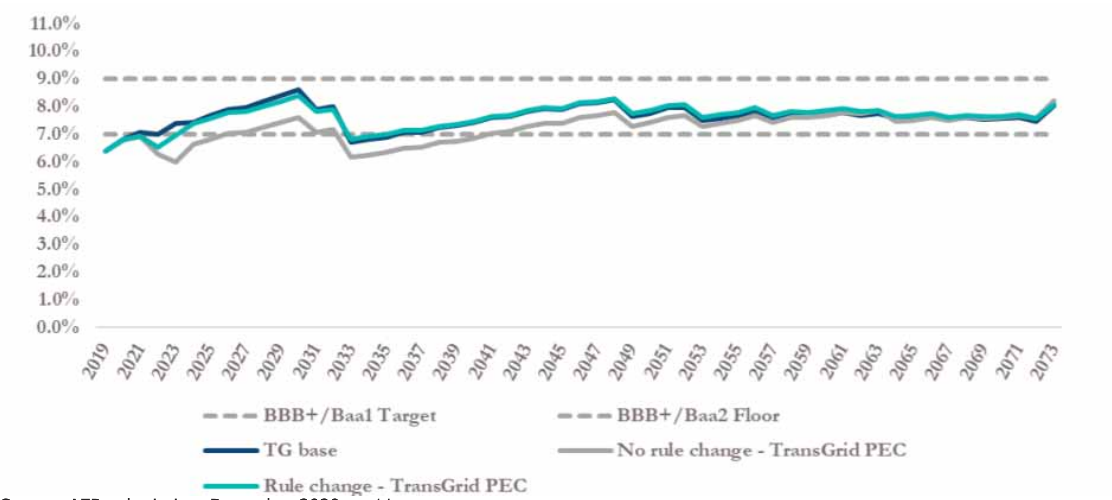
The AER submitted considerable analysis testing the proposition that actionable ISP projects are not financeable under the current regulatory framework. The AER considered that the current regulatory framework is relatively low risk and stable and has facilitated sufficient investment over multiple regulatory control periods. The AER observes that the framework has been shown to already provide investors with a stable and predictable regulatory investment framework that includes an ex-ante return on their investments. The allowed return on capital is set under the RORI. The AER's submission went on to explain that the

53 AER, submission to the consultation paper, p. 3.
54 ENGIE, submission to the consultation paper, p. 2.
55 AGL, submission to the consultation paper, p. 2.
56 AGL, submission to the consultation paper, p 1.
57 AGL, submission to the consultation paper, p. 1.

benchmark assumptions used in making and applying the RORI are for the purpose of estimating an allowed rate of return that is commensurate with the efficient financing costs of the regulatory investments, but go no further. The AER explained that the regulatory framework does not require service providers to be able to achieve the benchmark assumptions used in making and applying the RORI at all times.[58] It explained that the AER considers sector benchmarks rather than firm specific details in making the RORI and that the regulated firms have flexibility in their capital structure decisions and employ this accordingly.[59] The AER also noted that investment in PEC should decrease TransGrid's FFO/debt metric but this does not in itself indicates a financeability issue or an issue with the regulatory framework.[60]

The AER provided modelling analysis on PEC investment and its likely impact on TransGrid's FFO/net debt credit metric (Figure 4.3).[61]

Figure 4.3: FFO/net debt for PEC

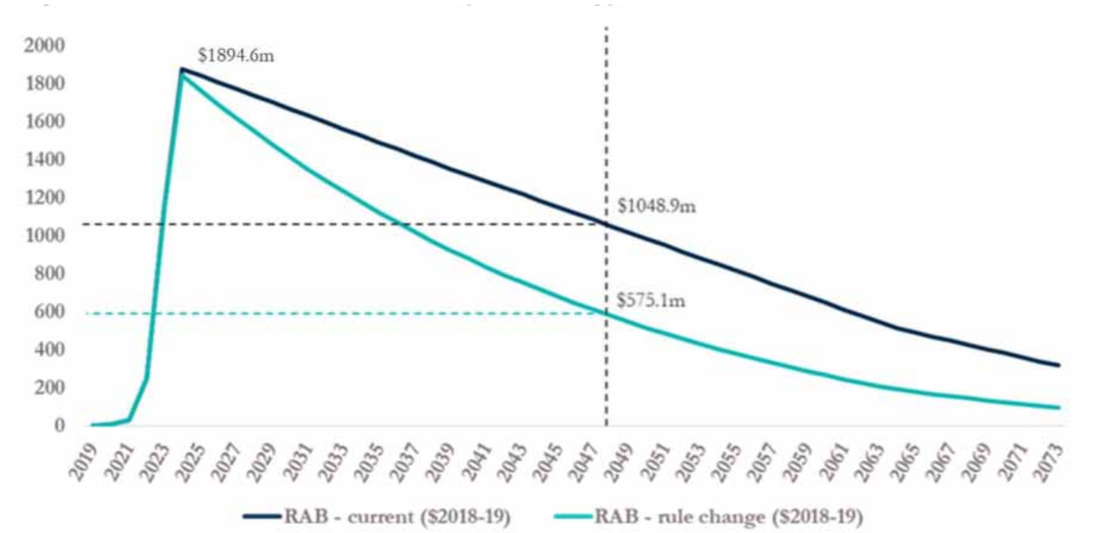


Source: AER submission, December 2020, p. 11.

The AER also provided analysis on the projected impact of the proposed participant derogation on the RAB value against the status quo. It points out that the proposed changes result in approximately 70 per cent of the asset value being paid off in real terms by consumers (via regulatory depreciation) over the first half of the project's life.:[62]

58 AER, submission to the consultation paper, pp. 4-5.
59 AER, submission to the consultation paper, p. 7.
60 AER, submission to the consultation paper, pp. 11-15.
61 AER, submission to the consultation paper, p.11.
62 AER, submission to the consultation paper, p. 8.

Figure 4.4: TransGrid RAB value scenarios



Source: AER submission, December 2020, p. 8.

The AER noted that:[63]

- while the regulatory framework provides service providers with a reasonable opportunity to recover at least their efficient costs, this does not require service providers to be able to achieve the benchmark assumptions used in making and applying the RORI at all times
- the proponent's proposal accelerates regulatory depreciation, which reduces revenues later in the asset's life, worsening future financeability metrics and potentially leading to long term financeability issues

All consumer representatives opposed bringing forward revenues and did not think their members would be better off under the rule change proposal.

The EUAA specifically noted that they were not aware of any customer consultation on intergenerational discount rates, which would make it difficult for the proponent to determine that, from a consumer's perspective, the proposal was value neutral. In their view, consumers are not indifferent to the two outcomes.[64]

ECA was concerned about the ability of consumers to pay more at this time, particularly given the evidence of COVID-19 induced financial stress. ECA was also concerned about shifting risks on to consumers by bringing cash flows forward.[65]

A number of submissions (EUAA, MEU, ERM Power, Engie) suggested that an alternative and potentially more preferable approach may include making financing and construction of new ISP investments contestable. Specifically, the MEU stated that the approach used by AEMO in

63 AER, submission to the consultation paper, pp. 5, 8.

64 EUAA, submission to the consultation paper, p. 11.

65 ECA, submission to the consultation paper, p. 3.

Victoria should be used if the proponent cannot carry out the project under the current rules.[66]

Some submissions (AEC, Origin Energy) also raised allocative efficiency arguments, noting that the proposed cash flow profiles are not consistent with those of real world alternatives to transmission augmentations, such as generation, in that generation only delivers positive net revenues to its ultimate beneficiaries when it is delivering output:[67]

> In addition, the analysis of customer benefits by FTI Consulting shows that the majority of spot price reductions occur in the later years of the project, therefore bringing forward the proponents' revenue will skew customer benefits by increasing costs (and hence reducing benefits) to customers in the earlier years of the projects, in exchange for more benefits in the later years of the project. As customers relationships will not be static for the multi decade term of the projects, this will create mismatches between customers in terms of their interactions with passed-on transmission charges, and as benefits in later years are less certain due to the vagaries of the market, there is a risk that the expected wholesale cost reductions will not materialise.

Other stakeholders held views that:

- financeability is a common issue for large ISP projects, including Marinus Link,[68]
- the existing regulatory framework for transmission creates a mismatch between when costs are incurred by the transmission network service provider (TNSP), and when revenues are recovered by the TNSP,[69]
- the interaction of the real return, the low rate of returns provided for by the rate of RORI and the large investment requirements are together creating the financeability issues[70]
- the rule change proposal provides further evidence that the current application of the regulatory framework is putting network businesses under threat of becoming unfinanceable at the benchmark credit rating assumed within the AER's estimate of the cost of capital.[71]

ENGIE also noted that interest rates are at historic lows, and that the cost of debt benchmark, which is based on a 10-year trailing average, should mean that projects should be able to attract debt at well below the AER's current cost of debt benchmark.[72]

In this regard the AER did also note that the 10-year trailing average cost of debt may not be appropriate for large, lumpy investments.[73]

66 MEU, submission to the consultation paper, p. 10.
67 AEC, submission to the consultation paper, p. 2.
68 TasNetworks, submission to teh consultation paper, pp. 1-2.
69 ENA, submission to the consultation paper, p. 7.
70 ATCO, submission to the consultation paper, p. 7.
71 AusGrid, submission to the consultation paper, p. 2.
72 ENGIE, submission to the consultation paper, p. 4.
73 AER, submission to the consultation paper, p. 17.

Financing of actionable ISP projects

Stakeholders provided numerous views on the proponent's submission that ISP projects are not financeable under the current regulatory framework. For example, AGL noted the proponent's statements that more than the 40% equity in the revenue allowance would be required or alternatively it could maintain 60% gearing level with sub-investment grade funding cost resulting in a debt costs in excess of the regulatory allowance.[74]

In particular, AGL did not consider that this should significantly limit TransGrid's ability to obtain finance, since they remain free to determine what level of leverage to adopt and may in fact opt for a higher level of debt. AGL considered that the low risk regulated returns available for network investment would be considered attractive to both TNSPs and providers of finance.[75] In addition, stakeholders also pointed out that current capital market conditions should provide support to financeability of immediate ISP projects:[76]

> One element of financeability not highlighted by the proponents is that interest rates are at historical lows, meaning that new projects should be able to attract debt finance well below the AER's current cost of debt benchmark, which is based on a ten-year trailing average. Of course, these conditions will not persist indefinitely, but since they coincide with a major round of transmission investment through the ISP, consumers should be able to benefit from them.

ENGIE also indicated a preference for a wider review considering how large transmission projects will be financed in the future. It pointed out that TNSPs get the monopoly right to build transmission assets in their local service area because there are existing stable regulatory arrangements that make them well-placed to finance them. Engie suggests that if the proponent's claim that this no longer holds is true, a broader range of solutions, including competitive procurement should be considered.[77]

AusGrid on the other hand, noting that some stakeholders suggested that emerging financeability issues are being caused by networks' actual gearing being greater than the benchmarking gearing considers that this alone cannot explain financeability concerns and noted that the benchmark firm should not be dependent on outperformance or unregulated revenue streams to maintain its credit rating.[78]

Ausgrid further considered that new investments effectively receive a financeability "cross subsidy" from older assets to younger assets which normally maintains reasonable profitability and credit metrics for the whole asset base.[79]

The EUAA was not convinced that the TNSPs would not invest, noting that:[80]

- the need for large ISP expenditures have been obvious for some years

74 AGL, submission to the consultation paper, pp. 1-2.
75 AGL, submission to the consultation paper, p. 1.
76 ENGIE, submission to the consultation paper, p. 4.
77 ENGIE, submission to the consultation paper, p. 4.
78 AGL, submission to the consultation paper, p. 4.
79 AusGrid, submission to the consultation paper, p. 6.
80 EUAA, submission to the consultation paper, pp. 8-11.

- TransGrid's presentation at the Macquarie investor conference[81]and the statement by OMERS when buying in to TransGrid[82] were supportive of large new investments
- other publications indicate that new investments are attractive
- the reportedly high RAB multiples paid by OMERS and by the other equity holders (noting the ENA's statements about the limitations to using RAB multiples) indicate that investors value regulated assets
- when pressed TransGrid would not say that it would not invest, or that it would delay investment
- recent NSW legislation provides alternative mechanisms to drive investment

The ENA also agreed that the issues set out by the proponent represent particularly clear examples, given the scale of the investment, of broader emerging concerns around the financeability for new investment across electricity and gas distribution networks, and electricity transmission networks. As an example, ENA points to recent negative cash returns on equity experienced by network service providers following the 2018 RORI.[83]

Credit metrics

In relation to the proponent's use of the FFO to net debt ratio, the MEU considers that the proponent is a little disingenuous in its portrayal that FFO/net debt is the prime metric that results in the ISP projects being non-viable under the current rules.[84] This view is supported by the AEC who expressed reservations about this claim and noted that the stability of the Australian regulatory regime should offer some support to prospective lenders to TNSPs.[85]

AusGrid acknowledge that rating agencies do place significant weight on qualitative factors as part of their credit scoring such as the stable regulatory environment and ownership model which drives up the credit rating. Adding that it noted that a drop in the FFO/Debt value for a sustained period can result in a downgrade:[86]

The AER submitted that:[87]

> However, an expected change in forecast financial metrics at a given debt to equity ratio does not of itself indicate a financeability issue, or that there is a regulatory framework problem. We considered hypothetical FFO/Net debt extensively when we made the 2018 RORI. In determining to not use a financeability assessment to inform our rate of return we considered:
>
> - The rate of return was relatively invariant to gearing; and

81 https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02233057-2A1224339?access_token=83ff96335c2d45a094df02a206a39ff4

82 https://www.omers.com/news/transgrid-welcomes-omers-to-its-ownership-group

83 ENA, submission to the consultation paper, p. 9.

84 MEU, submission to the consultation paper, p. 8.

85 AEC, submission to the consultation paper, p. 2.

86 AusGrid, submission to the consultation paper, pp. 8-9.

87 AER, submission to the consultation paper, p. 11.

- Therefore, our regulated return should be sufficient for all regulated firms to finance their operations.

Trade-offs

Stakeholders also commented on the potential economic efficiency implications of enabling some classes of infrastructure to benefit from a different regulatory treatment to others.

For example, Origin submitted that:[88]

> The proposed solution would create an uneven playing field between the proponents and other participants, including other transmission businesses and non-network solution providers. In addition, consumers would bear higher costs before receiving any benefit from the augmentation and would also face the risk of non-delivery.

The ECA expressed concerns that:[89]

> ...the rule change proposal perpetuates this approach by addressing the financing concerns through the National Electricity Rules rather than considering alternative, innovative approaches that avoid passing both cost and risk inappropriately on to electricity consumers with uncertainty around the timing of any benefits.

Other stakeholders commented on the potential transfers of risk and wealth of the proposed rule changes. PIAC considered that the rule change proposal shifts ISP project risk from the TNSP to consumers by requiring them to begin paying before any benefits are delivered and before the project is even commissioned. In particular, it submitted that customers are not better placed than TNSPs to manage these risks and the proposal shifts costs to consumers before they receive any benefits.[90]

Finally, ENGIE expressed concerns about the overall effect of the proposed rule change and emphasised the importance of matching costs and benefits over time.[91]

On the other hand, the CEC considered that consumers over time will not be worse off under the proposed changes as increases in revenue recovery now are offset by decreases towards the later stages of the asset's life.[92]

Stakeholders also commented on the overall impact of the proposed rule changes. ENA noted that the participant derogation will remove indexation of the RAB only for ISP projects, thereby removing the need for the AER to make a negative revenue adjustment to a TNSPs' depreciation allowance (for ISP projects). It further noted that this change has no impact on the total amount of revenue recovered by the TNSP in present value terms.[93]

88 Origin, submission to the consultation paper, p. 1.
89 ECA, submission to the consultation paper, p. 1.
90 PIAC, submission to the consultation paper, p. 1.
91 ENGIE, submission to the consultation paper, p. 3.
92 CEC, submission to the consultation paper, p. 1.
93 ENA, submission to the consultation paper, p. 7.

In its submission, AEMO noted that it understands that the proponent's is revenue neutral.[94]

A number of submissions thought that the materiality of the cost impact on consumers was understated, or suggested that changes may or should increase the scope of the proposed rule change, and hence its impact.

The MEU[95] and ERM Power were concerned that the rule would set a precedent and ultimately flow through to more or all NSP investments:[96]

> We are also concerned that making this rule change would set a precedent for future ISP projects. In isolation changing the rules for a single project may be acceptable – noting that we do not consider this to be the case for this rule change – but a blanket change to regulated network cost recovery rules would lead to more significant cost increases for consumers which would be unacceptable.

TasNetworks, Ausgrid,[97]ATCO[98], and the ENA[99] suggested that financeability solutions should be considered for application more broadly.[100]

4.2.2 Commission's observations

Preferences and the long-term interest of consumers

Having regard to the views provided by stakeholders in submissions to the consultation paper, and the limited information provided by TransGrid in its rule change request and submission to the consultation paper, the Commission does not consider there is a case for change. Stakeholders have raised a number of important questions, many of which the Commission has sought advice on from CEPA.

Further, the Commission notes that TransGrid has provided no information to suggest that it has sufficiently explored consumer preferences as part of the development of the rule change request.

This concern was shared by PIAC who submitted that:[101]

> PIAC is very concerned by the lack of specific, informed and quantitative consumer engagement conducted by TransGrid in the process of developing this rule change.
>
> While network businesses, including TransGrid, have made improvements in their consumer engagement in general, we are disappointed that has been lacking in this case.

94 AEMO, submission to the consultation paper, p. 1.
95 MEU, submission to the consultation paper, p. 4.
96 ERM Power, submission to the consultation paper, , p. 2.
97 AusGrid, submission to the consultation paper, p.2.
98 ATCO, submission to the consultation paper, p. 1.
99 ENA, submission to the consultation paper, p. 1.
100 For example, TasNetworks, submission to the consultation paper, pp. 1-2.
101 PIAC, submission to the consultation paper, 2021, p. 2.

The EUAA also pointed out that the proponent did not adequately consult with consumers on the rule change[102] and that they:[103]

> ...are not aware of any consumer engagement that the proponents have undertaken to establish the intergenerational discount rates of consumers nor whether today's consumers are willing to pay a certain amount today to provide consumers in 20-30 years' time with a very uncertain benefit. EUAA members are certainly not willing.

Further, stakeholders who expressed support for the proposed rule have failed to provide information that the proposed rule would be in the long-term interests of consumers.

Regulatory framework

While the Commission acknowledges the concerns of stakeholders regarding the timely delivery of ISP projects, it does not consider that the information provided by stakeholders demonstrates that the current regulatory economic framework creates a barrier to financing ISP projects.

Further, the Commission notes the AER's submission and the work it has carried out to test the financeability of ISP projects. The results of this work indicate that ISP projects, and in particular PEC, are financeable under the current regulatory framework.

In regards to the comments made by stakeholders referring to the RORI, the Commission notes the following:

- TNSPs are not bound by the RORI and are free to adopt a different capital structure
- negative returns on equity are a matter for the AER to consider as part of the RORI and are unrelated to the ISP.

The Commission has also considered how TNSPs are currently able to address financeability issues without making changes to the regulatory framework. These options are considered in the next chapter.

Finally, the Commission agrees with AusGrid that networks should not be dependent on unregulated revenue streams to maintain their credit rating. That said, the Commission strongly holds the view that networks can alter their capital structure to target or maintain a specific credit rating and that this is perfectly compatible with the design of the regulatory framework.

4.3 CEPA analysis on whether the regulatory framework creates a barrier to financing ISP projects

The Commission has engaged CEPA to provide advice on the financeability of TransGrid's ISP projects. This section provides a summary of CEPA's analysis on the financeability of the proponent's ISP projects and the conclusions drawn.[104]

102 EUAA, submission to the consultation paper, p. 16.

103 EUAA, submission to the consultation paper, pp. 11-12.

104 The CEPA report can be found on the AEMC's website.

4.3.1 CEPA's methodology

CEPA developed independent modelling of the TNSPs' revenue and financial performance under the current regulatory framework and the rule change proposal. Broadly speaking, CEPA have constructed a simplified version of the AER's Post-Tax Revenue Model (PTRM) and Roll Forward Model (RFM) to illustrate how the TNSPs' financial outcomes would change, were the rule changes to be implemented. CEPA use the analysis to:[105]

> ... assess the financial performance of a TNSP in terms of the key credit metrics used by Moody's, assuming that this TNSP was financed at the notional 60% gearing level. We consider how these credit metrics could be expected to evolve if the notional TNSPs invest in the identified ISP projects for TransGrid and ElectraNet, with and without the proposed rule change. We interpret the implications of these results for the financeability of ISP projects, drawing on our experience of how credit ratings agencies analyse utilities and how regulators in other jurisdictions approach financeability assessments.

CEPA used the revenue outputs from this process to construct an illustrative credit rating scorecard for each TNSP.[106]

4.3.2 CEPA's findings

CEPA's analysis confirms that with an investment profile consistent with the PEC project, financed at the benchmark efficient entity's capital structure, a notional TNSP would face pressure in relation to its FFO/Net Debt ratio. This is likely to further deteriorate as more ISP projects are included in the analysis. These results are generally consistent with the analysis provided by the proponent.

However, CEPA advised that in forming judgements, rating agencies look at a range of different metrics as well as qualitative factors. CEPA's analysis of the approach that Moody's takes to assessing ratings for network utilities indicates that it is by no means certain that a notional TNSP would not be able to maintain an investment grade rating, with the assumed investment profile and when all actionable and future ISP projects are included.

TransGrid has adopted a relatively narrow financeability test, that may not be appropriate for assessing the financeability of a notional entity.

The analysis conducted by the proponent has focused on a single credit metric, FFO/Net Debt. Moody's and other credit rating agencies combine an assessment of both qualitative and quantitative metrics to arrive at an overall rating. While CEPA agrees that FFO/Net Debt is a key factor considered by Moody's, CEPA considers that it is not appropriate for an assessment of the financeability of a *notional entity* to rely so strongly on this metric.

Within Moody's assessment framework, while FFO/Net Debt is an important consideration, it represents just 12.5 per cent of the factors that weigh in the overall credit assessment. CEPA's analysis indicates that performance of a notional entity against other financial ratios,

105 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 5.

106 Based on the Moody's 2017 Rating Methodology for Regulated Electric and Gas Networks.

in particular Net Debt/RAB and FFO interest cover, would likely be stronger than that indicated by the FFO/Net Debt ratio alone. CEPA's analysis indicates that the levels of the FFO interest cover metric, with and without the rule change, is broadly consistent with the threshold guidance provided by Moody's for a Baa1 rating, while the gearing ratio is considerably stronger than the tolerance level for Baa1.

Using an overall scorecard approach inclusive of qualitative elements and the other financial ratios, the overall indicated rating for the proponent in these circumstances could be considered to be consistent with a Baa1 credit profile, or stronger, over the period modelled.

TransGrid has not presented a transparent interpretation of the modelling results.

In relation to its modelling of a standalone project, TransGrid note that even if the proposed rule is implemented, the project is unlikely to achieve the FFO/Net Debt ratio that TransGrid consider to be consistent with a Baa1/BBB+ rating. Nonetheless, TransGrid consider that if the proposed rule change is implemented, it could, with prudent capital management, nonetheless achieve an investment grade rating sufficiently early to overcome the barrier to securing the capital necessary to proceed with the project.[107]

CEPA noted that TransGrid report the Equity IRR at lower gearing and note that it is below the cost of equity of the RORI (the "allowed cost of equity"). However, CEPA noted that TransGrid does not point out that a lower gearing level would mean that equity holders face lower risk, implying that their required return of equity would be correspondingly lower, i.e. the reduction in the return to equity is value neutral to equity holders. CEPA notes that TransGrid, and its advisors Incenta, have argued that this outcome would not be acceptable in light of the expectations of the businesses' existing investors.

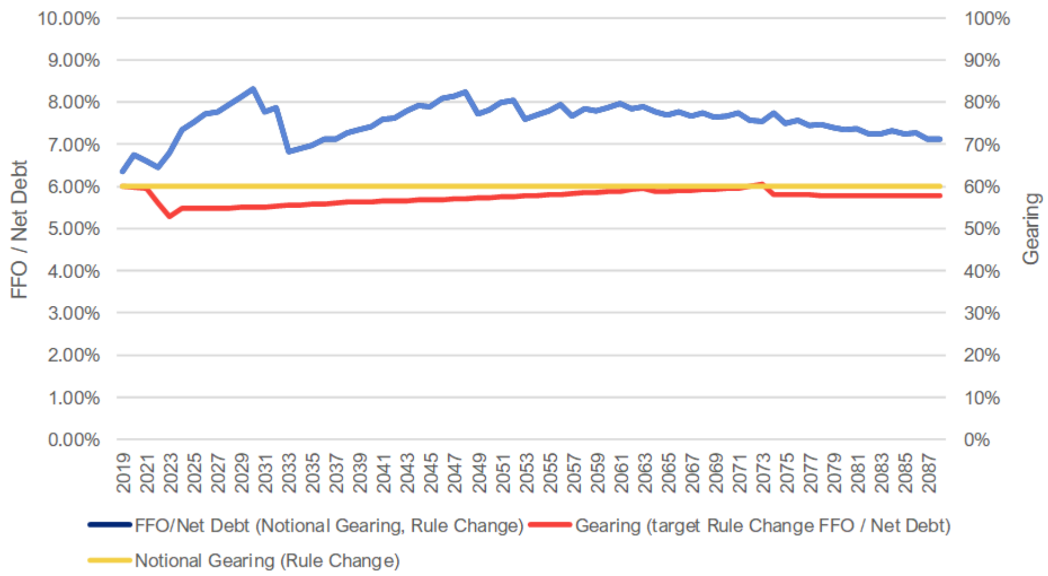
The extent of improvement resulting from the proposed rule change is relatively marginal

Consistent with the TNSP's modelling, CEPA's analysis also indicates that performance against the FFO/Net Debt ratio would likely improve if the proposed rule was made. However, considered in the context of the TNSPs' existing RABs and maintaining the 60 per cent gearing assumption, the difference in the overall performance against the quantitative and qualitative ratings factors is relatively small. This raises questions of the materiality of the rule change's effect, and consequently the significance of the financeability challenge that has been highlighted by the rule change proponents.

For example, CEPA note that the proponent could achieve the same FFO/Net Debt ratio as under the rule change proposal, with a relatively small change away from the notional gearing level. Figure 4.1 shows the gearing levels required to achieve the FFO/net debt level of the proponent's rule change request. It shows that, for example under the current regulatory framework with average gearing of 56 per cent over the first three regulatory periods, or 57 per cent over the entire period modelled, the TNSP could maintain FFO/Net Debt ratios consistent with those achieved under the rule change scenario. Options to improve financeability available to TNSPs are further discussed in Chapter 5.

107 TransGrid, rule change request, p. 5.

Figure 4.5: Gearing required to achieve the FFO/net debt level of the rule change request



Source: CEPA final report, 2021, p. 26.

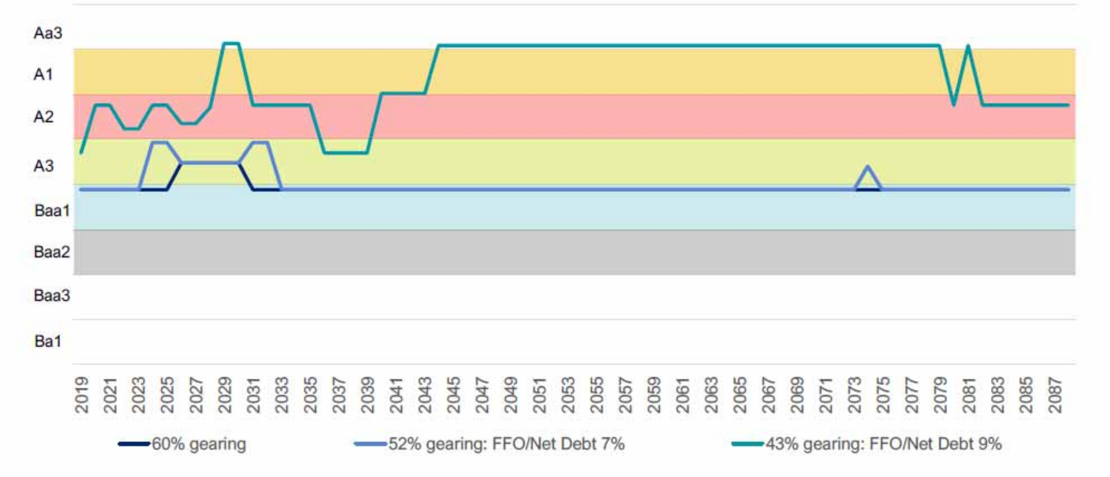
Figures 4.6 to 4.8 show CEPA's modelling scenarios of TransGrid's credit rating for three different scenarios:

- Existing RAB plus PEC project assuming no rule change
- Existing RAB plus all actionable (including PEC) plus future ISP projects assuming no rule change
- Existing RAB plus all actionable (including PEC) plus future ISP projects assuming the proposed rule changes are made under a participant derogation.

In particular:

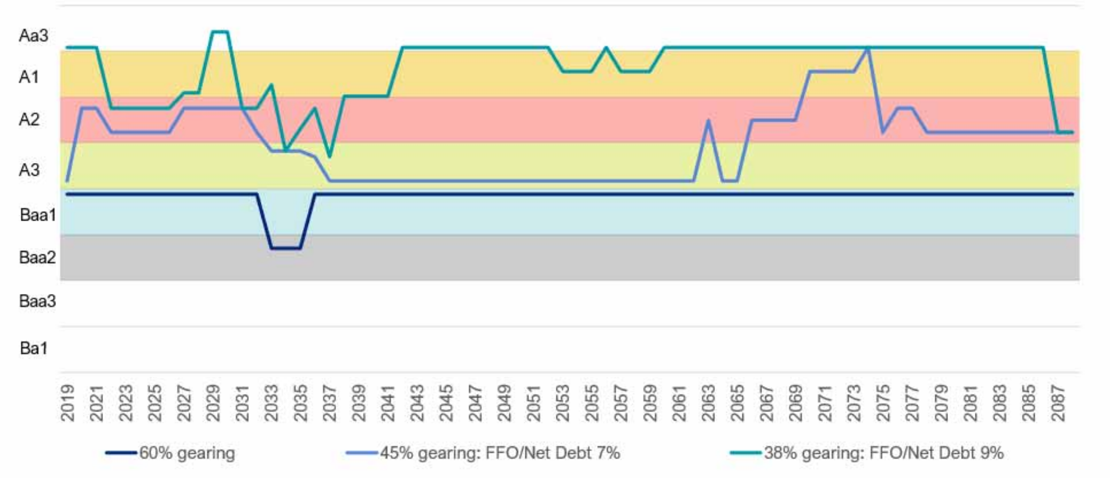
- Figure 4.6 shows that under a no rule change scenario, the proponent would be able to maintain a Baa1 credit rating with a 60 percent and 57% gearing level for the existing RAB and the PEC project.
- If all actionable and future ISP projects are added to that, CEPA's modelling indicates that the credit rating will drop to Baa2 in 2033, but otherwise remain at Baa1, as shown in figure 4.7.
- If the rules proposed by the proponent are made, figure 4.8 confirms that the proponent will be able to maintain a Baa1 credit rating with a gearing level of 60%.

Figure 4.6: Non-ISP capex+PEC - no rule change



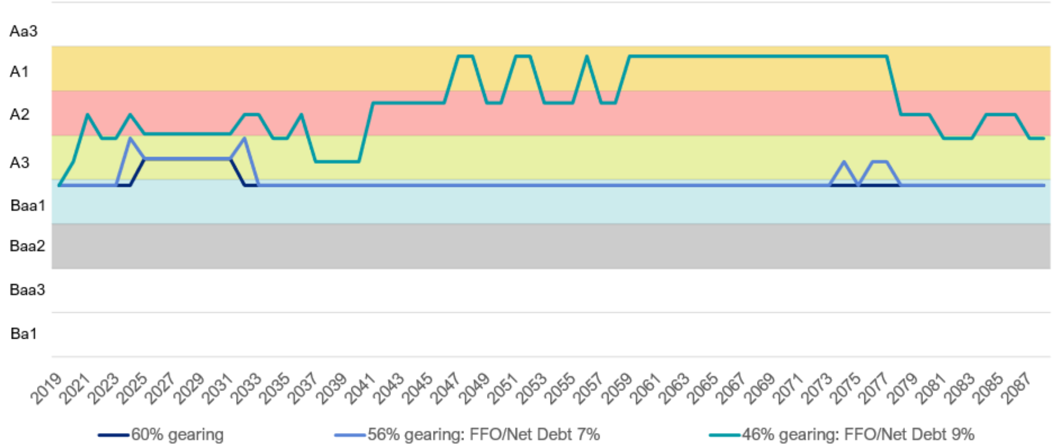
Source: CEPA final report, 2021, p. 82.
Note: TransGrid overall scorecard-indicated credit rating. TransGrid WACC assumptions.

Figure 4.7: Non-ISP capex plus all actionable and future ISP - no rule change



Source: CEPA final report, 2021, p. 86.
Note: TransGrid overall scorecard-indicated credit rating. TransGrid WACC assumptions.

Figure 4.8: Non-ISP capex plus all actionable and future ISP - rule change



Source: CEPA final report, 2021, p. 87.
Note: TransGrid overall scorecard-indicated credit rating. TransGrid WACC assumptions.

Finally, CEPA notes that this analysis is strongly influenced by the assumptions, in particular in relation to the allowed rate of return, the timing of ISP projects, and the magnitude of future ISP investments. The scenario analysis in relation to these issues indicates that different assumptions could change the assessment. In particular, in a scenario where all identified ISP projects are reflected in the analysis, while the scorecard-indicated outcome remains consistent with a Baa1 rating, performance against key coverage metrics is weakened, and the change in notional gearing to achieve ratios consistent with the rule change case is more substantial (although not necessarily unreasonable, as discussed further below).

The analysis of the proponent's credit rating is also sensitive to changes in future RORIs. For example, CEPA indicated that if it were to assume a return on equity that is more consistent with the cost of debt profile assumed by the proponent, financial performance of the notional entity would be substantially weaker in the near term, but much stronger in the longer term.

4.4 Delivery of individual ISP projects

The analysis provided by CEPA focuses on the financeability of ISP projects within the context of TransGrid's overall RAB. In the rule change request, the proponent also touches on the delivery of individual ISP projects. In addition to the financeability of TransGrid as an entity, the proponent's consultant Incenta also states that:[108]

> ...ensuring that the benchmark efficient entity has access to deep and efficiently priced debt and equity will promote the NEO by:

108 TransGrid, rule change request, pp. 29-30.

> - Maintaining the incentive on regulated businesses to investigate and invest in new major capital programs that bring material benefits to consumers across the entire NEM. Conversely, where deferred cash flow impacts on the capacity to attract capital, a business would be better off avoiding those projects and only doing smaller but less beneficial projects.
>
> ...the objective of the rule change is to ensure the capacity to finance the ISP projects, and so the relevant counterfactual is a world in which there is a serious risk that the ISP projects may not be delivered, or are not delivered in a timely manner".

While not explicitly stated, TransGrid's argument appears to be that incremental investments in new capital projects need to be attractive to investors on a stand-alone basis, because it is currently open to TNSPs to choose the projects that they will invest in. TransGrid's argument appears to be that a TNSP, behaving rationally, will only invest in new projects such as the PEC where the project itself generates returns on equity that are sufficient for the TNSP's shareholders, regardless of how attractive shareholder returns are on the rest of the TNSP's RAB. According to TransGrid, it is as a result of its cash flow profiles that the forthcoming ISP projects are at risk of not maintaining an investment grade credit rating with a 60 per cent gearing level and consequently they may be value diluting and so may not be attractive to investors.

CEPA pointed out that a reduction in gearing will result in a reduction of the equity beta and consequently the return on equity:[109]

> While it is possible that the balance of risk and return associated with a lower level of gearing is different from that required by the current shareholders of the TNSPs, it does not follow that the current regulatory framework requires changes in order to make TNSPs an attractive investment. Other potential shareholders may be more interested in funding the growth of the TNSPs under the existing framework. Globally there is substantial demand for attractive infrastructure assets, and Australian TNSPs are sought after "core infrastructure" assets. This conclusion is also supported by the above observations on levels of both notional and actual gearing for Australian and global regulated networks.

CEPA further pointed out that indeed, ElectraNet established a $725 million syndicated term loan and revolving credit facility in May 2020.[110] With respect to this transaction, CEPA noted that:[111]

> If we assume that investors were acting prudently these investments would have been made with the assumption that the existing framework would be maintained.

The Commission agrees that a business, behaving rationally, would only undertake those projects that it believes will add value to its shareholders, and that under the existing

109 CEPA, Financeability of ISP Projects, Report for the AEMC , 27 January 2021, p. 44.
110 CEPA, Financeability of ISP Projects, Report for the AEMC , 27 January 2021, p. 44.
111 CEPA, Financeability of ISP Projects, Report for the AEMC , 27 January 2021, p. 44.

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 agrees with stakeholders who consider it important that ISP projects which add value for consumers are delivered in a timely manner. However, the Commission also agrees 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 that some may not. The correct test is therefore at entity level, not project level.

Stakeholders have suggested alternative proposals to deal with the risk of non-delivery of ISP projects which, along with other potential options, merit proper consideration. As noted in the consultation paper[112] , the current PTRM arrangements were considered and developed over an extended period of years, with expert input and multiple rounds of consultation. A significant change to the PTRM regime as proposed would ideally be subject to a similar level of rigour, including robust consultation with consumers, so that the best option is adopted.

The Commission believes that the cost impacts are understated. The same project specific incentive arguments would be valid for all new network investments. The Commission's view is reinforced by the submissions from network businesses themselves and from the ENA suggesting that broader application is appropriate.

4.5 Commission's conclusions on whether there is a financeability issue

Based on its own analysis and careful consideration of consultant analysis and stakeholder feedback to the consultation paper and public forum, the Commission has found no financeability issue in respect of TransGrid's current share of actionable ISP projects (including PEC) which is caused by the current economic regulatory framework.

The Commission welcomes the clarification provided by TransGrid in its submission to the consultation paper regarding its reasons for focussing on the FFO/net debt ratio to demonstrate its perceived financeability issue with its current share of actionable ISP projects. However, while the Commission notes the importance of this metric, it considers that sole reliance on the FFO/net debt ratio to reach conclusions on the ability of a business to raise financing for these projects provides an incomplete picture. Consistent with CEPA's analysis, the Commission considers it is important to assess the full range of inputs, including the different quantitative metrics and qualitative factors used by rating agencies, when considering the ability of a business to maintain an investment grade rating. As CEPA's analysis indicates, if the full credit scoring methodology is used to predict credit ratings of a TNSP undertaking significant capital investments such as the ISP, there is no information that this would cause financeability issues.

112 AEMC, consultation paper, p. 30.

The Commission also noted the proponent's observation that a TNSP should be expected to achieve the credit rating determined to be efficient for a regulated TNSP. It noted however, that the concept of a benchmark efficient entity is a tool used by the AER and that this tool is not embedded in the rules or laws. TransGrid then goes on explaining that the financeability issue is not caused by a lack of efficiency, but rather due to the deferral of regulatory revenues. The Commission understands this, but also considers that the regulatory framework has been designed to defer revenue to, among others:

- ensure that consumers pay for assets when they are most likely to receive benefits
- ensure financial capital maintenance, so that in the future, assets earn a rate of return sufficiently high to allow the TNSP to remain financeable

Further, the Commission agrees that ISP projects have the potential to provide substantial benefits to consumers and the community in general.The Commission considers that the proposed rule, if made, has the potential to result in wealth transfers from consumers to the TNSPs, without changing the overall level of benefits to consumers. Consumers will only obtain a lower level of benefits if TNSPs choose not to invest in actionable ISP assets.

The Commission acknowledges that there is a risk that the proponent will decide to delay or not to make investments in actionable ISP projects. However, that risk exists even if the rule change is made. The Commission has taken into account that at this time there are a number of factors that mitigate the risk. These include:

- the current and particularly favourable cost of debt[113], particularly when compared to transmission WACC of around 6 per cent and the underlying debt cost assumptions[114]
- the favourable manner in which investments were described in investor presentations and announcements
- recent RAB multiples that have been achieved — accepting that there are other factors that impact the multiple
- the success of the current PTRM regime in delivering network investments to date

As a result, while the Commission considers that the timely delivery of individual ISP projects is important, the Commission does not consider it provides a sufficient basis for making the derogation sought by the proponent at this time.

While the Commission does not consider there is a financeability issue in respect of the proponent's share of current actionable ISP projects (including PEC), CEPA's analysis does indicate that, in the long-run, the impact of ISP projects on the TNSPs credit rating becomes more uncertain. The Commission has not, therefore, ruled out the possibility of material issues arising in the future in relation to the delivery of transmission investments — in particular, future ISP projects.

Further, the Commission notes that this rule change request, including submissions to it, has highlighted a broader set of potential issues related to the ability of the current regulatory

113 RBA, The Australian Economy and Financial Markets, 2021, pp 18-19.

114 AER, State of the energy market, 2020, P. 148.

framework to support the timely and efficient delivery of large transmission projects in the national electricity market (NEM).

For these reasons, the Commission intends to commence a broader review, in cooperation with the other market bodies, to consider options to support the timely and efficient delivery of large transmission projects that are in the long-term interests of consumers, recognising that the nature of transmission investment is invariably changing. While the scope of the review is yet to be confirmed, it is likely that it will include matters such as financing, regulatory and governance issues.

The advantages of initiating a review in conjunction with the other market bodies is that a review has the potential to consider alternative solutions, such as contestability and test these against consumer preferences and economic efficiency rather than making incremental changes to the existing framework for individual projects or groups of projects.

5 WHAT OPTIONS ARE THERE TO MANAGE FINANCEABILITY OF ISP PROJECTS?

Overall, the Commission considers there are actions transmission network businesses, including TransGrid, can take to address short term financeability issues, including raising equity from existing or new investors and re-investing a higher proportion of profits in the growth of the business. These options are outside the regulatory framework and can be pursued by businesses to help finance new large capital-intensive projects. The Commission considers that the regulatory framework is designed to allow a network service provider to adjust its financing arrangements to suit its circumstances, including in relation to the maturity of its asset base.

In coming to this conclusion, the Commission has had regard to advice from CEPA, information provided by the proponent and the views of stakeholders provided through submissions to the consultation paper and at a public forum.

This chapter outlines:

- the proponent's views on why financeability should be managed by making a derogation (section 5.1)
- observations on responsibility for managing financeability (section 5.2), and
- options to maintain financeability (section 5.3).

5.1 Proponent's views on why financeability should be managed by making a derogation

As discussed in the previous chapter, the proponent suggests that two key financeability issues are relevant to the Commission's assessment of the proposed rule.

The first is that the proposed rule facilitates investment in actionable ISP projects by removing what the proponent describes as significant barriers to securing the funding necessary to proceed with the projects.[115]

The second is that the proposed rule is consistent with the revenue and pricing principles of the NEL because it provides the benchmark efficient entity a reasonable opportunity to recover at least the efficient costs it incurs in providing network services, by allowing it to maintain access to investment grade debt.[116]

The proponent claims that the revenue it receives early in an asset's life isn't enough to sustain an investment grade credit rating with a 60 per cent gearing ratio for a new investment because the ratio of FFO/Net Debt for a project is at a level that is not consistent with an investment grade credit rating.

The proponent claims that this is an issue now because there are a number of large ISP projects, such as the new interconnector between New South Wales and South Australia

115 TransGrid, rule change request, section 5.2.

116 TransGrid, rule change request, section 5.3.

(Project EnergyConnect), that are about to be built, meaning that a significant proportion of the proponent's assets will be in an early phase of their life. The cumulative effect means that a benchmark efficient TransGrid would be unable to maintain an investment grade credit rating at 60 per cent gearing. According to the proponent:[117]

> If we invested in PEC (a typical ISP project) under the current arrangements and at benchmark gearing of 60%, we would receive a credit rating downgrade (from our current credit rating of Baa2 from Moody's). Our credit rating would fall further (to well below investment grade) if we invested in more ISP projects.

As set out in the previous chapter, the Commission does not agree with the proponent's analysis and conclusions in regard to the impact of the ISP investments on the proponent's credit rating.

The Commission also notes that there are additional mechanisms available to the proponent to ameliorate financeability issues associated with large investments, and this chapter discusses those mechanisms.

5.2 Observations on responsibility for managing financeability

5.2.1 Stakeholder observations

Obligation to manage financeability

The AER commented at length on the proponent's submission.

Overarching the AER's submission, they noted that:[118]

> ...financeability is substantially impacted by the practices and choices made by the firm itself. Regulated firms can, and do, engage in a range of practices specific to managing their own operations. This includes adopting individual financing and capital structure decisions to accommodate circumstances and management choices.

Level of gearing

The AER consider that the purpose of the benchmark assumptions goes no further than allowing it to estimate an allowed rate of return that is commensurate with efficient financing costs. The AER does not consider that service providers should be able to achieve (or better) the benchmark assumptions, including gearing assumptions, at all times.

Most relevantly, the AER submitted that:[119]

> We decided not to reduce the benchmark firm gearing of 60% debt to 40% equity used in the 2013 Rate of return guideline, despite average firm gearing being under 55% debt over the prior 5 years. This was in part because the allowed return was relatively invariant to gearing.

117 TransGrid, rule change request, p. 16.

118 AER, submission to the consultation paper, p. 2.

119 AER, submission to the consultation paper, p. 7.

The AER noted that, based on its cash flow forecasts:[120]

> *it appears TransGrid will broadly maintain an FFO/Net debt financial metric consistent with its current credit rating if it adopts a gearing of around 55% debt to 45% equity. This is within the gearing range regulated firms have operated at over the past 5 years*

CEPA also found that any required adjustments to gearing levels required to maintain FFO/Net Debt ratios could be relatively modest. For their Project EnergyConnect scenario:[121]

> *under the current regulatory framework with average gearing of 56% over the first three regulatory periods, or 57% over the entire period modelled, the TNSP could maintain FFO/Net Debt ratios consistent with those achieved under the rule change scenario*

CEPA also observed that:[122]

> ...in jurisdictions where financeability assessments *are* a key element of the regulatory framework, it is not uncommon for:
>
> - Notional gearing levels to change over time, and in particular for regulators to assume that the notional company would need to make equity injections to reduce gearing levels, in order to address weaknesses in credit metrics (Text Boxes 4 and 5 below).
> - Regulators to set notional gearing levels well below 60%, and for regulated energy networks to have actual gearing levels below 60%
>
> This suggests that it is reasonable to expect that investors in Australian energy networks – including alternative future investors, as well as current shareholders – would anticipate the need for lower gearing levels in the context of an unprecedented program of investment.

TransGrid supported Incenta's statement that:[123]

> *if the benchmark TNSP sought to maintain its investment grade credit rating by reducing gearing levels to below that of the benchmark entity it would likely have real world challenges in attracting equity finance. Specifically, the clientele of investors for network businesses are attracted to stable equity returns that are at a level that is consistent with a relatively high level of gearing.*

However, the AER submission showed that gearing levels below 60 per cent are common and indeed the average gearing level is below 60 per cent.[124]

120 AER, submission to the consultation paper, p. 12.

121 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 27.

122 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 40.

123 TransGrid, submission to the rule change request, p.17, supported with associated discussion at pp.25-30 of the associated Incenta report titled "*Attracting Capital for ISP Projects*", September 2020.

124 AER, submission to the consultation paper, p. 6.

CEPA commented that:[125]

- The market evidence considered by the AER during the 2018 RORI process, based on listed Australian energy networks, could have supported notional gearing below 60% (for example, the comparator evidence suggested a level of 55%). A broader view of market evidence of global listed networks is consistent with this, and indeed indicates that lower gearing levels have been acceptable to investors in these entities.

Other financing instruments

CEPA noted that there are a number of financing instruments that could be used to better match cash flows from investments in regulated assets.[126] For example, inflation linked bonds, where the inflation component is paid to investors on maturity, is a possible option for a company that wishes to reducing cash outflows during the term of the debt instrument. Likewise, zero coupon debt or hybrid securities could also reduce cash needs early on.

Impact on later cash flows

Having the TNSP, rather than the regulator, manage cash flows may also avoid unintended consequences. Concern was expressed about the proponent's proposal to bring regulated cash flows forward as this would reduce regulated cash flows in the future, meaning that there will be less cash flow available to support future investments. The AER noted that:[127]

> The regulatory cash flows will be materially lower in the second half of the assets' lives and this may cause cash flow problems in the future. We have seen this impact in overseas jurisdictions where accelerated depreciation has been employed.

The AER cited experience from the UK where Ofgem allowed cash flows to be brought forward through accelerated depreciation. This led to future financeability issues, creating a cycle where reduced cash flows were insufficient to cover later investments, requiring further intervention.[128] According to the AER, this is a long term risk associated with increasing cash flows in the short to medium term.

5.2.2 Commission observations

The Commission agrees with the AER that the purpose of the benchmark assumptions are to allow modelling of appropriate returns and that actual gearing levels will depend on circumstances and preferences. Further, the view that equity is not attracted to entities with gearing levels materially below 60 per cent is not supported by the market evidence, with many regulated entities operating at well below 60 per cent gearing.

The Commission also finds persuasive the fact that the AER considered and tested different gearing levels and found little change in the appropriateness of the rate of return. This

125 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 8.

126 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, pp. 45-48.

127 AER, submission to the consultation paper, p. 2.

128 AER, submission to the consultation paper, pp. 8-9.

indicates that, in determining its RORI, the AER considers whether the rate of return remains reasonable at lower gearing levels should this become necessary, as may now be the case. It also demonstrates that the AER has flexibility to examine and, if necessary, adjust benchmark gearing level in determining the appropriate rate of return in order to maintain the benchmark's relevance to actual gearing levels, thereby allowing network service providers to recover their efficient costs.

The Commission also observes that there are additional financing tools that could be considered by the proponent in order to improve financeability by better matching cash outflows and inflows.

5.3 Existing options to maintain financeability

The Commission notes that there are a number of options that could be used to manage future financeability issues should they arise and have the potential to materially impact the long term interest of consumers.

5.3.1 Regulatory options for managing financeability issues

Options under the current NEL and NER

The AER considered financeability assessments in the context of the 2018 RORI. When setting the rates of return it is open to the AER to adjust its benchmark assumptions, including gearing levels and credit metrics. In developing the 2018 RORI the AER also considered the impact of lower gearing levels.

It may also be open to the AER to incorporate benchmark assumptions about the type of instruments that a benchmark efficient NSP in a growth phase could use to finance its activities. CEPA observed for example that "*Ofwat and Ofgem have adjusted their approach to the allowed cost of debt to reflect the use of index-linked finance*".[129] Better matching of debt assumptions could help to manage the risk of debt being raised at a materially different rate to debt assumptions in revenue allowances.

CEPA, however, acknowledges that it may not be possible for the RORI to account for "non-standard circumstances."[130] Adjustments can be made to the benchmark assumptions used to set the RORI. However, section 18J of the NEL requires that:

> (2) If a rate of return instrument states a way to calculate the rate of return on capital or the value of imputation credits, the instrument must—
>
> (a) provide for the same methodology to apply in relation to all regulated network service providers in calculating the rate or value; and
>
> (b) provide for the methodology to apply automatically without the exercise of any discretion by the AER.

129 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 48.

130 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 50.

This limits the degree to which the individual circumstances of each benchmark efficient entity can be taken into account.

Notwithstanding this potential limitation, there do appear to be measures that the AER can take within the common methodology to accommodate particular investment profiles. For example, the AER recognises that, for lumpy investment profiles, the current trailing average cost of debt approach may lead to firms being materially incorrectly compensated. According to the AER, this issue might also be addressed by using a trailing average weighted according to the amount of debt relative to the RAB each year, or by transitioning new assets from spot rates to a trailing average over time. The AER has said that it will consider if changes are desirable and if so what can be done when the AER makes the RORI in 2021.[131]

Options outside of the current NEL and NER

The Commission has considered the information available to it at the current time and concluded that the regulatory framework is not creating a barrier to TransGrid being able to secure finance for its share of current actionable ISP projects. Even if circumstances were to change such that there was a case to adjust cash flow profiles then there are alternatives that may be preferable. Some of these are as follows.

Accelerated depreciation

The AER could be provided with discretion to adjust the depreciation rate. The AER is currently constrained through the operation of NER clause 6A.6.3, which requires depreciation schedules to reflect the nature of the assets over their economic lives. The Commission notes that the AER does not support this option as they believe that depreciation should be linked to economic principles in order to prevent distortions.[132]

Targeted financeability adjustments

TNSPs could be explicitly allowed additional revenues in the short term, offset by lower revenues in the longer term. This option would allow changes to the revenue profile to be explicit and highly targeted. The option is described more fully in section 3.4.1 of the accompanying CEPA report.

Totex

The Commission examined a total expenditure (or 'totex') framework as part of its 2019 Electricity Networks Economic Framework Review.[133] in response to a recommendation of the Finkel Inquiry.[134] Energy Networks Australia also published a totex discussion paper in 2018.[135]

131 AER, submission to the consultation paper, p. 17.

132 AER, submission to the consultation paper, p. 14.

133 AEMC, Electricity Networks Economic Framework Review, Final Report, 2019.

134 Dr Alan Finkel AO, Chief Scientist (Chair), Ms Karen Moses, Ms Chloe Munro, Mr Terry Effeney, Professor Mary O'Kane AC, *Independent Review into the Future Security of the National Electricity Market – Blueprint for the future*, June 2017, Recommendation 6.8.

135 Frontier Economics, *Why Totex? Discussion Paper*, 24 July 2018 (for Energy Networks Australia).

A totex framework is designed to remove incentives to incur capital expenditure instead of operating expenditure, or to incur operating expenditure instead of capital expenditure, by treating capital expenditure and operating expenditure identically. Under totex, a fixed proportion of all expenditure, regardless of whether it is capital or operating in nature, is funded through NSP revenues in the year in which the expenditure occurs, and the remaining expenditure goes to the RAB. The terms "operating expenditure" and "capital expenditure" are replaced by "fast money" and "slow money".

In its 2017 totex advice to the Commission, Frontier Economics recommended that a financeability test be used "*when determining the rate at which the totex allowance is to be capitalised within the RAB.*"[136]

In its 2019 *Electricity networks economic framework review,* the Commission did not reject a totex approach, but decided not to proceed with it at the time, noting that:[137]

> Development of a totex assessment approach is not currently considered a priority issue by stakeholders and would be a significant reform – requiring considerable resources at a time when there are numerous other major reform projects underway by the Commission and others.

Options to deal with potential non-delivery of projects

The rule change request has brought to light a characteristic of the current regulatory framework which could lead to projects not being delivered. TNSPs have a monopoly right, but no obligation, to deliver transmission projects under the national regulatory framework.[138]

There are currently no alternatives if a TNSP decides, for reasons outside of the national regulatory framework, not to deliver a project and there are also no regulatory consequences for the TNSP. This section discusses two possible methods of ameliorating these issues.

We may explore these issues (including the possible options noted below) in a separate piece of work which would consider, more broadly, options for the efficient and timely delivery of transmission projects (including ISP projects).

Contestable service provision

A number of stakeholders including the MEU, ERM Power, the Clean Energy Investor Group (CEIG) and ENGIE suggested that transmission projects could be made contestable, particularly where the TNSP refused to fund them.[139] CEPA also explored contestable service provision, citing examples of where it has been successfully used overseas.[140] Finally, the AER engaged Houston Kemp to provide a report on the Regulatory treatment of large, discrete

136 Frontier Economics, *Total expenditure frameworks, A report prepared for the Australian Energy Market Commission*, December 2017, p. ix

137 AEMC, Electricity Networks Economic Framework Review, Final Report, 2019, p. 67.

138 noting that there are potential options available to the NSW Government through the *Electricity Infrastructure Investment Act 2020,* but these are outside of the national regulatory framework.

139 MEU, submission to the consultation paper, p. 10; ERM Power, submission to the consultation paper, p. 3; CEIG, submission to the consultation paper, p. 2; ENGIE, submission to the consultation paper, p. 4.

140 CEPA, Financeability of ISP Projects, Report for the AEMC, 8 January 2020, section 3.2.

electricity transmission investments, which examines introducing competitive tension to the planning and delivery functions.[141]

Origin Energy also suggested that TransGrid or ElectraNet themselves could assess private sector funding appetite.[142]

Incentives for timely investment

Incentives could be used to drive timely investment. At present, there is no consequence for a TNSP if a project runs late or is not delivered. Consequences are borne by consumers, even though consumers have no control over project delivery. An incentive scheme could provide for TNSPs, who do have control over project delivery, to share those consequences with consumers through revenue reductions if projects are delivered late and through revenue uplift if projects are delivered early.

An incentive scheme may be particularly appropriate where overall returns to a benchmark efficient TNSP provide a reasonable opportunity to recover at least their efficient costs, but where some projects are less attractive than others on a stand-alone basis.

The NER already provide for an incentive scheme which:[143]

> *provides Transmission Network Service Providers with incentives to provide prescribed transmission services in a manner that contributes to the achievement of the national electricity objective*", under which the AER must have regard to whether "*the benefits to electricity consumers that are likely to result from efficiency gains in respect of a transmission system should warrant the rewards provided under the scheme, and the detriments to electricity consumers that are likely to result from efficiency losses in respect of a transmission system should warrant the penalties provided under the scheme.*

However, the scheme currently only applies to small scale investments and is limited to 0.5 percent of maximum allowed revenue. By contrast the Service Target Performance Incentive Scheme provides for incentive up to 5 per cent of maximum allowed revenue.

5.4 Conclusions

The regulatory framework is designed to allow a network service provider to adjust its financing arrangements to suit its circumstances. There are a number of potential options available to TNSPs and the regulatory framework, by design, does not constrain their use.

Should circumstances arise in future that warrant changes to cash flow profiles, then other and potentially more preferable options, such as totex, are available.

The Commission intends to further explore options to address the risk of non-delivery of TNSP capital projects.

141 Houston Kemp, *Regulatory treatment of large, discrete electricity transmission investments - A report for the Australian Energy Regulator,* 19 August 2020, Chapter 5.

142 Origin, submission to the consultation paper, p. 2.

143 NER section 6A.7.5.

6 TRANSGRID'S PROPOSED RULE IS UNLIKELY TO PROMOTE THE NEO

For the reasons outlined in this chapter, the Commission is not satisfied that the participant derogation proposed by TransGrid — which would bring forward revenue recovery for TransGrid's actionable ISP projects — would contribute to the achievement of the NEO.

In this draft determination, the Commission has sought to understand whether the regulatory framework is creating a barrier to TransGrid financing its share of actionable ISP projects and therefore whether a potential change to the Rules is warranted. This process has provided the background and key facts against which the Commission has considered the likely impacts of TransGrid's rule change request.

This chapter sets out the Commission's consideration and assessment of TransGrid's proposed participant derogation against the NEO, having regard to the revenue and pricing principles and the views of TransGrid, other stakeholders and the AEMC's consultant, CEPA.

As noted in chapter 4, the term "financeability" is not used in the NEL. However, financeability issues could potentially impact achievement of the NEO to the extent that these issues have a material impact on the long-term interests of consumers. The Commission's analysis therefore includes an assessment of the impact of the proposed participant derogation on consumers.

6.1 Assessment of the proposed rule by the proponent

In TransGrid's view, the proposed participant derogation relates to efficient investment in electricity services in the long-term interests of consumers. By addressing the financeability, TransGrid argues that the proposed changes will facilitate efficient investment in actionable ISP projects in the NSW region of the NEM. It noted that:[144]

> …efficient investment requires access to efficiently priced debt and equity finance so that regulated businesses have the capacity to deliver on the service requirements that are demanded by consumers.

Referring to comments provided by its consultant, Incenta, TransGrid considers the proposed participant derogation supports the NEO for the following reasons:[145]

- By ensuring that the benchmark efficient entity has access to deep and efficiently priced debt and equity, the proposed participant derogation will:
  - maintain incentives on regulated businesses to investigate and invest in new major capital programs that bring material benefits to consumers across the entire NEM, and
  - promote productive efficiency by facilitating access to efficiently priced and reliable sources of debt and equity finance, minimising the costs to society for investment.

144 TransGrid, rule change request, p. 28.

145 TransGrid, rule change request, pp. 28-29.

- The proposed participant derogation is Net Present Value neutral, meaning that it is also neutral in the context of the long-term interests of consumers with respect to price.

TransGrid also argue that the proposed changes will support the revenue and pricing principles in the NEL because they:[146]

- provide a benchmark efficient entity with a reasonable opportunity to recover at least the efficient costs it incurs in providing network services (this is because the cash flows generated are sufficient to maintain access to investment grade debt and associated interest rates)
- provide more effective incentives to promote economic efficiency, including efficient investment in the transmission system, and
- support the principle that regard should be had to the economic costs and risks of the potential for under and over investment, by removing disincentives to invest in large projects that deliver material market benefits.

6.1.1 Impact on consumers

In TransGrid's view, the proposed participant derogation will allow consumers to obtain significant benefits in the long term, while still ensuring the NPV neutrality of revenue.[147]

TransGrid argues that by bringing revenues forward, the proposed derogation will allow it to obtain financing for its ISP projects consistent with the efficient benchmark financing costs without creating any additional costs to consumers over the long-term. For example, TransGrid's consultant Incenta notes that:[148]

> …bringing forward cash flows to support businesses accessing capital does not create any additional cost to consumers over the long term. That is, it only impacts on the timing of revenue to the regulated business, and not the overall value of the investment. As such, the change is NPV neutral. It follows, therefore, that bringing forward cash flows is also neutral in the context of the long-term interests of consumers with respect to price.

TransGrid also argues that, overall, customers would be better off because the long-term benefits they receive from the timely delivery of ISP projects will outweigh the additional costs borne by current customers from making the proposed changes to the NER.

In its rule change request, TransGrid includes analysis around the impact of the proposed changes on consumers.[149] It estimates that the application of the proposed changes to PEC will result in consumers paying, on average, an additional $3 per household per year in transmission charges for the remaining years of TransGrid's current regulatory period (expiring in 2023). However, TransGrid goes on to note that:[150]

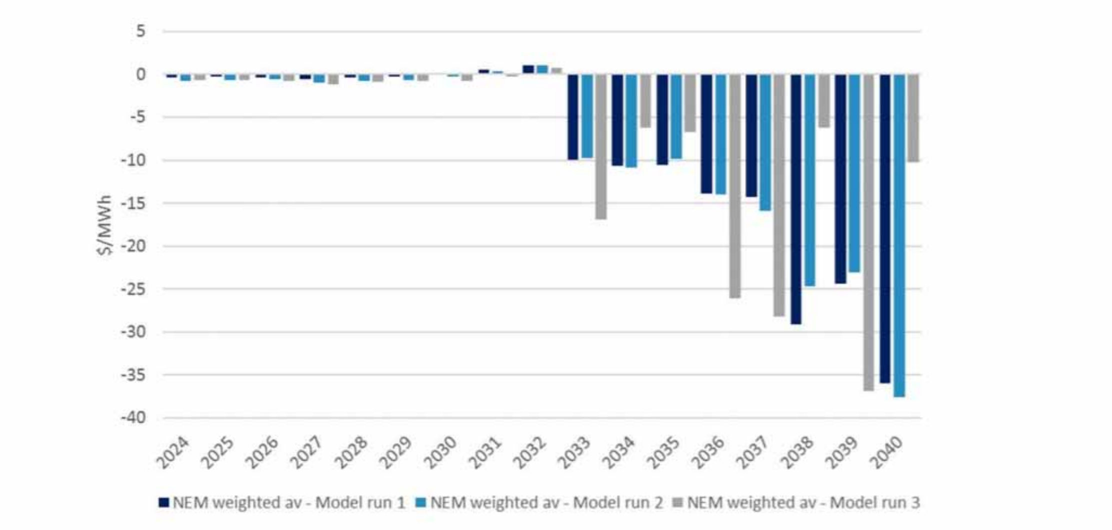
146 TransGrid, rule change request, pp. 29-30.
147 TransGrid, rule change request, 2020, pp 28-29.
148 TransGrid, rule change request, pp 28-29.
149 TransGrid, rule change request, p. 26.
150 TransGrid, rule change request, p. 36.

> …the rule change will facilitate investment in ISP projects that would otherwise not be financeable. The benefits to consumers of having the ISP projects in place have been identified to be significantly greater than the increase in transmission charges by AEMO.

Following a review of the costs and benefits of PEC, TransGrid's economic consultant FTI estimates that the net cost saving to a household in NSW arising as a result of PEC would, on average, be between $58.40 and $63.90 per year.[151] In particular, FTI computed forecast benefits for NSW consumers from reductions in wholesale electricity prices consequent to the commissioning of the PEC and the connection of generators.

TransGrid acknowledges that an implication of bringing forward cash flows is that it will impact on the profile of transmission prices. That is, *"…it will cause prices to be relatively higher early on and relatively lower in later years than would occur under the status quo."*[152] This is demonstrated by analysis undertaken by FTI which shows that consumers would get the benefits of substantial savings from lower wholesale electricity prices after the commissioning of PEC.[153] Further, FTI points out that the bulk of the reductions in wholesale electricity prices is likely to occur during the later stages of the PEC after 2030 (Figure 5.1).

Figure 6.1: Annual weighted average NEM wholesale price impact from PEC



Source: FTI Consulting, Assessing the benefits of interconnectors, 2020, p. 12.

However, TransGrid agrees with the views of Incenta who state that:[154]

151 FTI, Assessing the benefits of interconnectors, October 2020, p. 13.

152 TransGrid, rule change request, p. 36.

153 FTI noted that "EnergyConnect results in a material reduction in the weighted-average wholesale price in all NEM regions. The average decrease in NEM wholesale electricity prices over the 2020 to 2040 modelling period is between $7.0/MWh/year and $7.4/MWh/year." FTI, Assessing the benefits of interconnectors, October 2020, p. 11.

154 TransGrid, rule change request, p. 29.

> ...in the context of ISP projects...this change in the profile of prices is unlikely to have any material impact on the promotion of the NEO.
>
> - First, we note that the sheer size of the capital expenditure necessary for ISP projects means that prices will inevitably rise because of the project, with or without bringing forward cash flows. As such, it is only the marginal increase on a price rise that is caused by the bring forward that is relevant.
> - Secondly, and more importantly, the objective of the rule change is to ensure the capacity to finance the ISP projects, and so the relevant counterfactual is a world in which there is a serious risk that the ISP projects may not be delivered, or are not delivered in a timely manner. Accordingly, any apparent distortion from efficient use that may be caused by a shift in the profile of prices would need to be weighed against the very large benefits that are expected from the ISP projects.

In this regard, TransGrid highlights Incenta's view that:[155]

> …it is not inappropriate for customers to pay prices as are necessary to preserve the capacity for firms to access capital needed for ISP projects. As indicated above, ultimately the financing function of a transmission business is undertaken to deliver investments that are for the direct benefit of end use customers. Network businesses are required to bear the costs of these investments over their entire economic life, the quid pro quo from customers is that they also commit to assisting to maintain the conditions needed to attract capital over that time.

6.2 Observations on the proponent's assessment of the proposed rule

6.2.1 Stakeholder observations

Impact on risk allocation

The EUAA and ERM acknowledged that the move from a real rate of return framework to a nominal return framework would shift inflation risk to consumers but that there had been no explicit mention of this in the proposals.[156] The EUAA specifically noted the significance of this for consumers. [157]

PIAC and the ECA also expressed concern regarding the transfer of risk from network operators to consumers. Both considered that consumers, unlike the TNSP or their investors, have very little ability to manage the risks associated with ISP projects and so it is inappropriate for them to bear them.[158]

Origin also noted that existing consumers would face the risk of non-delivery until the project is completed and that it was not clear that it would be efficient to recover costs early.[159]

155 TransGrid, rule change request, p. 29.

156 EUAA, submission to the consultation paper, p. 5; ERM Power, submission to the consultation paper, p. 3.

157 EUAA, submission to the consultation paper, p. 5.

158 PIAC, submission to the consultation paper, p. 1; ECA, submission to the consultation paper, p. 3.

159 Origin, submission to the consultation paper, p. 2.

While Infigen supported the proposed change to an unindexed RAB, it was less supportive of the proposed change to as incurred depreciation noting that the high construction risks would not be offset by any compensatory benefits to consumers over the same period, resulting in a greater step change in costs to consumers in the near-term.[160]

TransGrid reiterated the view that the rule change was not seeking to amend the way that inflation is applied by the AER or the way that the AER determines the nominal cost of capital. Rather, its purpose is to apply the forecast nominal cost of capital to a real asset base.[161]

Impact on the regulatory framework

The MEU and ERM expressed concern that the rule changes would create a precedent for future ISP projects and potentially all network investments.[162] ERM Power considered that a blanket change to regulated network cost recovery rules would lead to an unacceptable cost increase for consumers.[163]

Similarly, PIAC was concerned that if other network businesses pursue similar derogations, costs for consumers would increase and certainty to stakeholders and investors regarding the treatment of future transmission projects would be undermined.[164]

TasNetworks noted that it would support the ENA proposing that the changes (if made) be available to all large renewal ISP projects that face the same problem.[165] Infigen and AGL made similar suggestions, noting that any changes should apply to all network investments.[166]

The ENA considered that the issues highlighted by the requests were stark examples of a broader trend of emerging issues of financeability for new large scale investment across mature electricity and gas networks.[167] Recognising a similar issue, SnowyHydro, ENGIE and TasNetworks all alluded to the need for broader changes to the framework in light of the size and scale of transmission projects.[168] In the event a problem was identified, ENGIE suggested that the consideration of more fundamental changes include the removal of the monopoly rights of TNSPs to build major projects in their own service area).[169] TasNetworks considered that the AER's Transmission Investment Review may be an appropriate forum to address how agreed principles relating to financeability would be available more broadly to projects that share the problem.[170]

Impact on regulatory compliance and administration costs

160 Infigen, submission to the consultation paper, p. 2.
161 TransGrid, submission to the consultation paper, p. 9.
162 MEU, submission to the consultation paper, pp. 9-10; ERM Power, submission to the consultation paper, p. 2.
163 ERM Power, submission to the consultation paper, p. 2.
164 PIAC, submission to the consultation paper, p. 2.
165 TasNetworks, submission to the consultation paper, p. 2.
166 Infigen, submission to the consultation paper, p. 2; AGL, submission to the consultation paper, p. 2.
167 ENA, submission to the consultation paper, pp. 1, 5.
168 SnowyHydro, submission to the consultation paper, p. 2; ENGIE, submission to the consultation paper, p. 1; TasNetworks, submission to the consultation paper, p. 2
169 ENGIE, submission to the consultation paper, p. 1.
170 TasNetworks, submission to the consultation paper, p. 2.

The AER suggested the AEMC explicitly consider the impact of the proposed derogation on regulatory compliance and administration costs, which it considers are likely to increase somewhat with the creation of a second RAB.[171] The AEC was also of the view that establishing a second RAB would increase the difficulty of the AER's task and complicate the ability of stakeholders to scrutinise TNSPs' regulatory returns.[172]

While ElectraNet noted that the practicalities of a second RAB would need to be considered, it did not consider this to be administratively costly or complex. It also noted that the establishment of a second RAB also provides a level of transparency and rigour that is appropriate from a regulatory perspective.[173]

Impact on consumers

Over half the stakeholders who responded to the consultation paper, including all consumer representatives, did not agree that the proposal is NPV neutral from a customer perspective. These stakeholders considered that the proposed changes would increase costs to consumers without providing corresponding benefits.

Neither were they convinced that the NPV neutrality argument was an effective way to show consumer indifference between two outcomes.[174] The EUAA questioned why it was appropriate to apply the same discount rate to benefits (which are uncertain) as is applied to costs (which are certain).[175] Similarly, the MEU considered that the analysis should include a discount rate that reflects the risk profiles of consumers rather than the risk profile faced by NSPs. It considered that if a higher discount rate was used, the different approaches to setting cashflow would not be neutral.[176]

ERM Power also considered that with costs incurred upfront and benefits delivered over the long term, it is more likely that consumers will find that the NPV benefits are negative and that the approach proposed in the rule change will cost consumers more. It also noted that while it acknowledged the impact on households may only be a few dollars per year, this ignores the impacts on commercial and industrial users who consume far more energy and as such will be burdened with far higher costs.[177]

PIAC noted that the proposal would shift costs to current consumers who will not receive the full benefits of the ISP project and effectively cross-subsidise future consumers who will not be exposed to the full costs.[178]

ECA was of the view that not only would the rule change proposals add to already high electricity costs in the short term, it would also run counter to the idea that consumers

171 AER, submission to the consultation paper, p. 4.
172 AEC, submission to the consultation paper, p. 1.
173 ElectraNet, submission to the consultation paper, p. 12.
174 EUAA, submission to the consultation paper, p. 11; MEU, submission to the consultation paper, p. 6.
175 EUAA, submission to the consultation paper, p. 11.
176 MEU, submission to the consultation paper, p. 6.
177 ERM Power, submission to the consultation paper, pp. 2, 3.
178 PIAC, submission to the consultation paper, p. 1.

should pay in line with the benefits they receive by seeking to 'front-end' cost recovery from consumers.[179]

The AEC noted its reservations about customers paying for assets for which they are not receiving any benefit, since it does not accord with common accounting treatments. It considered that, given customers relationships will not be static for the multi-decade term of the projects, bringing forward revenue would create mismatches between customer prices and benefits which, in later years, are less certain due to the vagaries of the market.[180]

Origin considered the additional burdens placed on consumers as a result of the proposed changes would be particularly pertinent for large projects such as PEC where the net benefits are already marginal and where costs are higher than expected. It also acknowledged that that proposed changes would likely lead to a temporal misallocation of costs to consumers and will therefore lead to inequitable outcomes for consumers.[181]

The AER did not agree with TransGrid's suggestion of proposed financial impacts on consumers from these rule changes. The AER considers that the average household would pay an additional $6.5 per year over the next two regulatory control periods, and then would pay $5 less per year over 2040-50.[182]

CEIG noted support for the AEMC conducting further assessments of consumer impacts to minimise any potential adverse effects, including the cost and benefits of bringing forward some revenue recovery.[183]

While TasNetworks was supportive of the proposed changes, it recognised that they would increase charges to customers in the near-term and that all alternative solutions that minimise customer price impact should be considered, including Commonwealth support for financing and use of financial market products, for example extending tenure of debt or swapping floating for fixed debt.[184]

A number of other stakeholders, in particular the networks, agreed with the proponent that although the proposed changes may increase costs to current consumers, future consumers would pay less.

For example, the CEC was of the view that any increase to consumer bills would not be material and in the context of the net benefits and wholesale price reductions that the ISP build out would provide, this increase was acceptable.[185]

Infigen was also of the view that while short-term costs to consumers would increase slightly, this would be offset by longer-term gains. It noted that it was credible that under current low interest rates, residential consumers in particular may preference a lower discount rate than TransGrid and hence deliver a lower NPV of costs for consumers. Infigen was less

179 ECA, submission to the consultation paper, p. 3.
180 AEC, submission to the consultation paper, p. 2.
181 Origin, submission to the consultation paper, pp. 1, 2.
182 AER, submission to the consultation paper, p. 9.
183 CEIG, submission to the consultation paper, p. 2.
184 TasNetworks, submission to the consultation paper, p. 2.
185 CEC, submission to the consultation paper, p. 1.

supportive of the move to as incurred depreciation, however, noting that it would be highly unusual for consumers to pay for an asset before it exists and is utilised.[186]

ElectraNet reiterated the importance of the proposal to support the financeability and timely delivery of PEC. It considered that proposed changes would deliver a revenue profile more closely aligned with the profile of customer benefits and improve inter-generational equity by reducing the cost burden on future customers. It also noted that the proposed changes would not impact the total capital cost of the project, meaning there would be no increase in revenue in present value terms, but result in substantially lower total revenues on an undiscounted basis.[187]

TransGrid reiterated its view that it did not consider that the proposed changes would change the costs, benefits or risks of their share of the ISP projects for consumers. It explained that the impetus for the rule change request was that, under the current regulatory methods, the ISP projects would not be financeable, and so there was a risk that these would not be built or would not be delivered in a timely manner. It considered that placing a substantial weight on perceptions of intergenerational equity focussed solely on transmission revenues creates a risk that consumers ultimately may be made worse off.[188]

Consideration of the costs and benefits of PEC

The EUAA strongly suggested that forecast benefits that are outside RIT-T benefits measured under the rules should not be within scope of this rule change.[189] ERM Power also considered that the forecast benefits of PEC were likely to be largely irrelevant to the rule change and suggested the AEMC focus on whether the rule change would meet the NEO.[190]

PIAC was not convinced that the proponents had made a convincing case that ISP projects would not be financed without the proposed derogation. As such, it considered that the project benefits claimed by TransGrid and ElectraNet are uncertain and out of scope of the proposed rule change.[191]

In contrast, Snowy Hydro considered it was critical that the timely delivery of actionable ISP Projects is given appropriate weight in the Commission's assessment of this rule change request.[192] The CEIG also suggested that the AEMC carefully consider the potential costs for consumers of ISP projects being delayed or not built if financeability issues are not resolved, and the potential long-term implications for the optimal development of the power system.[193]

The AER noted that, irrespective of the outcome of the rule change process, there was a risk that TransGrid and ElectraNet might not go ahead with PEC, meaning there would always be a risk that the benefits from this project would not be realised.[194]

186 Infigen, submission to the consultation paper, p. 2.
187 ElectraNet, submission to the consultation paper, p. 14.
188 TransGrid, submission to the consultation paper, p. 11.
189 EUAA, submission to the consultation paper, p. 3.
190 ERM Power, submission to the consultation paper, p. 1.
191 PIAC, submission to the consultation paper, p. 2.
192 SnowyHydro, submission to the consultation paper, p. 2.
193 CEIG, submission to the consultation paper, p. 3.
194 AER, submission to the consultation paper, p. 3.

The EUAA was also concerned by the lack of consumer engagement undertaken by the proponents to establish the intergenerational discount rates of consumers, and whether today's consumers are willing to pay a certain amount today to provide consumers in 20-30 years' time with a very uncertain benefit. In respect of the latter, it noted that EUAA members would not be willing to.[195]

6.2.2 Commission observations

As noted above, TransGrid has stated that the objective of the rule change request is to ensure the timing of revenue is aligned with the efficient financing costs of its actionable ISP projects. TransGrid's assessment of the proposed participant derogation, and its benefits, is therefore based on:

- a counterfactual where, in the absence of the participant derogation, there is a risk that actionable ISP projects will not proceed, and
- the possibility that implementation of the participant derogation will enable TransGrid to obtain cheaper financing for PEC projects.

These claims are discussed further below.

The counterfactual

TransGrid's assessment of the proposed participant derogation, including its identification of benefits, has been made in relation to a counterfactual where *"there is a serious risk that the ISP projects may not be delivered, or are not delivered in a timely manner"*.[196]

As discussed in chapter 4, the Commission considers there is no regulatory barrier to TransGrid financing its share of actionable ISP projects (including PEC). Further, as discussed in chapter 5, the Commission is satisfied that there are options available to TransGrid to help it manage potential financeability issues, to the extent an issue does arise.

The Commission has therefore assessed the proposed participant derogation in the context of the current regulatory framework not posing a barrier to the financing of ISP projects. Importantly, this is the counterfactual against which the Commission has assessed TransGrid's proposed participant derogation.[197]

In response to the proponent, the Commission is not in a position to conclude that unless the proposed participant derogation is made, TransGrid will either not proceed with its share of PEC and/or other actionable ISP projects, or will not proceed with these projects in a timely manner.

As observed by the AER in its submission to the consultation paper, it is difficult to anticipate the potential actions of TransGrid and potential investors in the context of large investments.

195 EUAA, submission to the consultation paper, pp. 11, 12.

196 TransGrid, rule change request, p. 29.

197 Had the Commission identified an issue with the regulatory framework, consideration of the proposed participant derogation against the NEO would have included issues such as the possibility that TransGrid will not proceed with its share of ISP projects, or the possibility that TransGrid does proceed with its share of ISP projects but with direct government funding or support.

There is always some risk that TransGrid may choose not to go ahead with its share of actionable ISP projects, irrespective of the AEMC's decision on this rule change request.[198] However, the Commission considers that if TransGrid should choose not to proceed with the PEC project, this is likely to be a business decision and not a consequence of a failure of the regulatory framework.

The issue of TNSPs ultimately having the ability to choose whether to proceed with an actionable ISP project which they have been allocated is a matter relevant to the ISP framework, rather than the economic regulatory framework. While assessment of the costs and benefits of ISP projects proceeding or otherwise are outside the scope of this rule change request, the AEMC intends to explore this matter further as part of its review of the options available to support the timely and efficient delivery of transmission projects, including ISP projects.

TNSPs to benefit from cheaper financing for PEC projects

The Commission has considered the impacts on the cost of financing ISP projects. While bringing forward cash flows may indeed result in cheaper financing costs, the Commission considers that these savings will accrue to the TNSP and are unlikely to be passed on to consumers.

As indicated by the AER and CEPA, TNSPs are free to choose their own capital structure and financial instruments under the current regulatory framework:[199]

> We also note we considered sector benchmarks rather than firm specific details in making the RoRI. The firms we regulate have flexibility in their capital structure decisions and employ this accordingly.

TNSPs are also incentivised to minimise their financing costs in order to maximise the efficiency savings they will be able to keep under current arrangements. For example, TNSPs keep any savings they achieve by outperforming the RORI. In particular, TNSPs raising debt at current rates below the AER's 10-year trailing average cost of debt, will keep the difference in debt financing costs arising out of the differential. The AER submitted that:[200]

> *We consider the regime should be set to achieve the NEO and provide service providers with a reasonable opportunity to recover at least their efficient costs. However, this does not require service providers to be able to achieve the benchmark assumptions used in making and applying the RoRI at all times. The benchmark assumptions used in making and applying the RoRI are for the purpose of estimating an allowed rate of return that is commensurate with the efficient financing costs of the regulatory investments, but go no further.*

The Commission considers that most if not all of any relatively cheaper financing costs are going to benefit TNSPs and their investors and not consumers.

198 AER, submission to the consultation paper, p. 3.
199 AER, submission to the consultation paper, p. 7.
200 AER, submission to the consultation paper, p. 5.

Impact on consumers

The Commission considered the proponent's argument about the NPV-neutrality of their proposal[201] but noted that stakeholders pointed out that consumers may have different discount rates yielding different NPV impacts than those experienced by the proponent.[202]

6.3 CEPA's analysis of the impact of the proposed rule on key stakeholders

In its report prepared for the AEMC, CEPA considered the impact of TransGrid's proposed participant derogation on customers, and on TransGrid and its investors. In respect of the impact on consumers, CEPA identified three key effects of the proposed changes:[203]

- higher prices in the near term
- efficient pricing/intergenerational effects
- revenue smoothing

In respect of the impact on investors, CEPA explored two key areas:[204]

- Improvement in short term revenues vs longer term growth
- Investor demand for inflation-linked revenues

6.3.1 Impact on consumers

Higher prices in the near term

CEPA undertook analysis to test TransGrid's claim that the proposed participant derogation would ensure the NPV neutrality of revenue without creating any additional costs to consumers over the long-term.[205]

CEPA's modelling (which used the AER WACC as the discount rate) confirms that TransGrid's proposed changes are close to NPV-neutral. The difference (attributable to the impact of the tax allowance) is approximately $200 million in NPV terms.[206] This is compared to TransGrid's total revenue allowance of approximately $28 billion.[207]

CEPA notes that NPV neutrality is an important concept in regulatory finance as it ensures that changes to revenue profiles and related cash flows preserve rights of a company and are neutral to investors. However, it notes that NPV neutrality is not the same as neutrality from a customer perspective. Indeed, referring to a recent AER decision, CEPA notes that if

201 TransGrid, rule change request, p. 22; ElectraNet, rule change request, p. 6.

202 For example: EUAA, submission to the consultation paper, p. 11; MEU, submission to the consultation paper, p. 6.

203 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, section 4.3.

204 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, section 4.4.

205 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 62.

206 CEPA calculated the difference between the proposed changes and current arrangements over the entire modelled period and including all ISP projects.

207 For ElectraNet, the difference between rule change and status quo over the entire modelled period, including all ISP projects, is approximately $23 million in NPV terms, compared to a total revenue allowance of approximately $8.5 billion.

consumers were asked to pay all investments immediately (consistent with NPV neutrality), those customers could go bankrupt or simply stop consuming.[208]

From a customer perspective, CEPA's analysis indicates that the proposed changes would lead to a larger increase in prices than the current arrangements, with lower prices later in the life of an asset. CEPA's estimated that between 2020 and 2035, the price impact of PEC alone on TransGrid's [and ElectraNet's] customers would be, on average, 0.05 cents/kWh (real 2018$) higher under the proposed changes compared to the status quo, with peaks of over 0.1 cents/kWh around project completion.

It notes that the price impact of the proposed derogation becomes larger if additional ISP projects are considered.

Efficient pricing and intergenerational effects

CEPA explored the possibility that the proposed changes would result in a more efficient price profile relative to the status quo by better aligning the profile of revenues of a project with consumer benefits.[209]

Specifically, CEPA reviewed the analysis provided by ElectraNet in its rule change request to support the claim that changing the Rules to bring forward cashflows would better align the profile of revenues associated with PEC with the consumer benefits associated with this project. ElectraNet presented two charts to support this claim, the first illustrating the nominal revenue associated with PEC and the second showing a summary of the discounted benefits of PEC.

In considering this issue, CEPA noted that ElectraNet's analysis compares (undiscounted) nominal revenue with discounted benefits. It goes on to state that if undiscounted nominal revenues are compared to the undiscounted benefits of PEC, the alignment between revenues and benefits is much closer under the current framework approach compared to proposed changes.

CEPA also undertook an academic literature review on the optimal depreciation paths for determining the revenue of regulated services, as considered by the AER.

Overall, based on the evidence it has gathered, CEPA does not agree that the proposed changes would result in an efficient profile of prices.

Revenue smoothing

CEPA also considered the impact of moving to an unindexed RAB (that is, a nominal rate of return model) on TransGrid's revenue and, subsequently, on prices.[210]

It notes that, when a regulated utility invests and its asset base increases, it is common for allowed revenues to increase. When returns are based on a nominal rate of return with an unindexed RAB, there is a large increase in the allowed revenues and accordingly customer

208 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 62. Reference to AER, Draft decision Ausnet services transmission determination 2017-18 to 2021-22 - Attachment 6 Regulatory Depreciation.

209 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p.p 62-62.

210 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 63.

prices also increase. When returns are based on a nominal rate of return and an indexed RAB, revenues and prices also increase, but this increase is less sharp.

CEPA referred to the AER's observation that: *"Indexation of the RAB leads to smoother revenue and prices. It also significantly reduces the increase in revenues that invariably happens when assets are replaced at the end of their useful life."*

CEPA did not quantify the volatility of revenues that would result from a move from the current real rate of return framework to a nominal rate of return framework but notes that it would likely be a consequence of its adoption.

6.3.2 Impact on investors

Improvement in short term revenues vs longer term growth

In its report, CEPA notes that the switch to the use of a nominal return of return model rather than a real rate of return model would, by removing indexation of RAB, increase revenues in the early years of the asset life, and lower them in the later years. CEPA also notes that its modelling confirms that the proposed approach is net present value neutral.[211]

In theory, therefore, CEPA considers an investor should be neutral between the proposed changes and the status quo. However, it noted that in practice, there are two offsetting factors:

- the opportunity for earlier cash flows under the proposed approach would allow companies to improve credit metrics, which may lead to a reduction of the cost of debt.
- The use of an indexed RAB under the current approach would provide businesses with the opportunity for RAB growth which may be desired by investors

CEPA notes that it has previously investigated this issue for the AEMC. Based on analysis of selection of analyst reports, CEPA concluded that RAB growth *"is a generally desirable outcome in investors' consideration of regulated businesses."*

Investor demand for inflation-linked revenues

CEPA notes that the evidence and actions of investors in global infrastructure assets, including energy networks, suggests that an important reason why investors have been attracted to Australian energy network infrastructure is because of the stable revenues and inflation protection that it offers.[212]

CEPA provides two quotes from investors in Australian energy network assets — IFM and Spark Infrastructure — to illustrate this. For example, Spark infrastructure states that: *"The regulatory regime remains incentive based with a range of opportunities for out-performance and various in-built protections. Importantly, it provides inflation protection of revenues and the Regulated Asset Base and pass-throughs for operating and capital costs."*

211 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 63.

212 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, pp. 63-64.

CEPA also notes that, since the foundation of the NEM, there has been significant growth in investor interest in global infrastructure assets including energy networks and that demand from investors for 'core infrastructure' has been strong.

6.4 Assessment of the proposed rule against the NEO

Based on its own analysis, advice from consultants and information provided in submissions to the consultation paper and public forum, the Commission is not satisfied that TransGrid's rule change request will, or is likely to, contribute to the achievement of the national electricity objective. This is because (as discussed in chapters 4 and 5) the Commission considers the regulatory framework does not create a barrier to TransGrid financing its share of actionable ISP projects (including PEC). The application of a different set of Rules to these — as well as TransGrid's share of future — actionable ISP projects is therefore not warranted.

Nevertheless, the Commission has assessed the proposed rule against the NEO to understand the potential impact of the proposed changes on the long term interests of consumers and therefore the suitability of the proposed solution to address financeability of ISP projects, should an issue arise in the future.

The Commission is not satisfied that the form of the proposed participant derogation will, or is likely to, contribute to the achievement of the NEO relative to the current arrangements. The Commission's consideration of the proposed rule against the assessment criteria (set out in chapter 3) is set out below.

The Commission has also taken into account the revenue and pricing principles in the NEL[213] in applying the rule making test. The Commission's analysis indicates that the current arrangements are consistent with these principles.[214]

6.4.1 Risk allocation

Risks should be borne by, or allocated to, parties who are in the best position to manage them and have the incentives to do so. This ultimately leads to lower costs for consumers. The Commission has therefore considered the potential for each of the two components of the proposed participant derogation to transfer risk (for example, inflation risk) between different parties (for example, TransGrid and consumers) and whether this allocation of risk is likely to result in efficient outcomes.

In summary, by applying depreciation as incurred and an unindexed RAB to TransGrid's share of ISP projects, the proposed participant derogation would transfer some risks — in particular, inflation risk and completion risk — from TransGrid to consumers who are not best placed to manage these risks.

The exposure that investors in energy networks have to inflation risk comes from the indexation of the RAB. Currently, inflation is capitalised into the RAB and investors receive inflation compensation through depreciation and the effect of a relatively larger RAB (as

213 Set out in section 88 of the NEL.

214 See chapter 3 for a summary of the Commission's considerations regarding the revenue and pricing principles.

compared to an unindexed RAB) through the rate of return. The implication of the annual indexation of the RAB is that transmission network charges paid for by consumers also increase annually in line with inflation. All other things being equal, this means that changes in network charges (due to inflation) will match change in wages of consumers (and so their capacity to pay) relatively closely. In this sense, consumers are "protected" from inflation risk. Another way of thinking about this proposed change is that it would result in the PTRM targeting a nominal rate of return instead of a real rate of return.

Removing RAB indexation for TransGrid's share of ISP projects would mean that network charges will no longer increase in line with inflation, thereby removing the natural hedge currently provided to consumers (assuming that their incomes change with inflation too). This may be undesirable for consumers in the future since it would likely introduce a mismatch between changes in network charges and income because of the removal of indexation of only one of these variables. In this sense, the change proposed by TransGrid would have the effect of exposing consumers to inflation risk which, under current arrangements, they are currently protected from given they are not best placed to manage it.

Incorporating capex spend into the RAB on an 'as incurred' basis (rather than when assets are commissioned) is a tool that can be used by regulators to encourage businesses to undertake capital investments that might otherwise be deferred due to construction risk.[215] By requiring consumers to pay regulatory depreciation on investments for several years before a project is commissioned, at least some construction risk (for example, the return of capital aspect of construction risk) can be transferred from businesses to consumers.

More importantly, however, is the risk that moving to as incurred depreciation 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.[216] In this sense, a move to as incurred depreciation as proposed by TransGrid 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.

6.4.2 Impact on regulatory framework

Future network investments in the NEM are financed in accordance with the PTRM. This model has several characteristics: it spreads costs of providing services to the time consumers use the services; and provides a risk adjusted rate of return over time set in the RORI for network service providers. These characteristics (or principles) have been a key feature of regulation in Australia developed over the last twenty or more years.

215 Construction risk is often a problem with 'first-of-a-kind' builds or with particularly large and complex projects. Water networks, for example, typically involve large investments in physical capital which potentially give rise to construction risks, including risks associated with constructing water assets underground. In the context of electricity networks, construction risks may include easement issues, the risk of the construction company becoming insolvent and risks associated with the return on capital.

216 A business could, for example, have a project 99.9 per cent built but not commissioned for as long as it wanted to and still receive all of the revenue for that project, even though it is delivering no customer benefits.

In assessing TransGrid's proposed participant derogation, the Commission has therefore considered the impact of the proposed changes on the regulatory framework, including the implications of having different regulatory frameworks and principles apply to different transmission assets in selected NEM regions. The Commission has also considered the implications of the proposed participant derogation on the governance framework in the NEM.

Overall, the Commission considers that the proposed changes would represent a significant departure from established principles of regulation in Australia which, if implemented in the absence of a material problem caused by a shortcoming in the Rules, would be unlikely to promote the long term interests of consumers.

Implementation of arrangements which would apply as incurred depreciation and a nominal rate of return to TransGrid's share of ISP projects would result in different arrangements being applied between TransGrid and other participants, including other transmission businesses and non-network solution providers. This has the potential to harm consumers for several reasons:

- As noted by Origin, non-network proponents of ISP projects would not have the ability to recover costs earlier and so an uneven playing field would be created when assessing whether a network solution provided by TransGrid, or a non-network solution put forward by a third party, could provide better value for consumers.[217]
- Allowing for a separate RAB with different arrangements to apply in NSW only could potentially distort capital markets more broadly by incentivising funds to flow to TransGrid's ISP projects and away from other similar ISP projects. This may, in turn, distort efficient investment in transmission.

In addition, while the proposed changes would only apply to TransGrid and its share of actionable ISP projects, there is a risk that making the proposed derogation could trigger a broader move away from the real rate of return model (and depreciation as commissioned) as other network businesses with large investment programmes claim that they face similar issues. ElectraNet's proposed participant derogation is a case in point.

This possibility raises some broader questions, including around whether the nature of ISP projects warrants their different treatment within the regulatory framework relative to other transmission projects. It also raises several issues around governance of the regulatory framework.

In respect of the former, the Commission notes that ISP projects have two distinctive features: they are large in the context of the asset values of the network businesses; and they are often separable from other transmission assets.[218] These characteristics are not, however, specific to ISP projects. They are characteristic of large, discrete transmission projects undertaken by network businesses generally.

217 Origin, submission to the consultation paper, pp. 1, 2.

218 CEPA, Financeability of ISP Projects, Report for the AEMC, 27 January 2021, p. 65.

In this regard, TransGrid's proposed derogation raises the question of whether the current regulatory framework and its settings remain appropriate for all large, discrete transmission investments (including large ISP investments), and whether modifications may be appropriate in the future, in certain circumstances, to better support network businesses in the timely and efficient delivery of these projects. The Commission considers that issues of this nature are best considered on a NEM-wide basis, rather than on a network business specific basis through progressive requests for participant derogations.[219]

Further, the Commission notes that TransGrid's proposed participant derogation seeks to make changes to the economic regulatory framework administered by the AER. This framework, applied to all network businesses within the NEM, is reviewed by the AER on a regular basis to ensure that it applies best practice principles in its regulatory determinations.

BOX 2: GOVERNANCE PRINCIPLES

The AER's functions under the Australian Energy Market Agreement (AEMA) encompass economic regulation of the NEM, including electricity transmission regulatory functions.

Under the AEMA, the AEMC is a rule making, market development and market review body. The AEMC's role includes making the rules under which the AER undertakes economic regulation. The AEMC is not responsible for determining prices or revenues.

The 2015 Review of Governance Arrangements for Australian Energy Markets, undertaken for the COAG Energy Council said:

"Australian energy market governance, which the Panel believes is in line with, and in some of its elements defines, international best practice, relies on three principles:

- *clear specification of limited and stable policy or regulatory objectives;*
- *institutional separation of the different powers and responsibilities; and*
- *delegation of legislative (market rule making), executive (administrative, enforcement and operational matters) and quasi-judicial powers and responsibilities to specialist agencies.*

Source: Australian Energy Market Agreement (as amended December 2013), sections 8.1 and 9.1(a)
Source: NEL, section 2, definition of *transmission determination.*
Source: Dr. Michael Vertigan AC, Professor George Yarrow, Mr Euan Morton, *Review of Governance Arrangements for Australian Energy Markets*, Final Report, October 2015.

In the Commission's view, the separation of rule making and economic regulation represents best practice. The risk of progressive requests made to it by network businesses to take individual assets out of the existing regulatory framework and applying a different framework determined by the AEMC (rather than the AER) is likely to undermine the AER's role in administrating the regulatory framework and introduce substantial regulatory uncertainty to NSPs and their investors.

219 The AEMC intends to explore these broader issues among others, further through a self-initiated review later in 2021.

6.4.3 Impact on regulatory compliance and administration costs

In its submission to the consultation paper, the AER noted its support for the framework proposed by the AEMC for assessing the proposed participant derogation. However, the AER suggested the explicit consideration of regulatory compliance and administration costs, which it considers are likely to increase somewhat with the creation of a second RAB.[220]

The Commission has therefore considered the impact of the proposed changes on regulatory compliance and administration costs and agrees with the AER that the likely need to create a second RAB for TransGrid for its share of ISP projects would make scrutiny of capital expenditure efficiency and prudency more complicated and result in increased administrative costs.

The Commission has also considered the potential for the proposed changes to increase complexity in the application of the regulatory framework to network businesses. The proposed changes would significantly increase complexity in the application of the regulatory framework by both requiring the management of alternative classes of assets within the regulatory framework and ensuring the RORI appropriately applies for both nominal and real rates of return.

An increase in regulatory complexity may be an appropriate trade-off to make where there is evidence of a material issue to solve through making changes to the Rules. However, given the counterfactual against which the Commission is assessing the rule change request, the increased complexity of the regulatory arrangements introduced by the proposed changes would be unlikely to result in better outcomes for consumers.

6.4.4 Impact on efficient operation of electricity services

Timely investment in transmission projects that improve reliability and security in the NEM will support the efficient operation of the power system for the benefit of consumers. The Commission therefore notes the importance of ensuring that the economic regulatory framework does not create barriers to TNSPs delivering investments (including ISP projects) in a timely manner so that consumer benefits are not lost or deferred.

In this context, the Commission has considered the impact of the proposed changes to the regulatory framework on the incentives for TransGrid to complete its share of ISP projects on time.

In summary, the Commission does not consider that the proposed changes will promote efficient operation of the power system relative to the current arrangements. Specifically, the Commission considers that the depreciation component of the proposed participant derogation could weaken incentives for TransGrid to deliver projects to time by providing it with more income prior to completion of a project. This is unlikely to be in the long-term interests of consumers.

220 AER, submission to the consultation paper, p. 4.

6.4.5 Impact on efficient investment of electricity services

When considering whether TransGrid is able to recover its efficient costs, the Commission has had regard to the revenue and pricing principles set out in section 7A of the NEL.

The regulatory framework is intended to provide TNSPs with a reasonable opportunity to recover at least their efficient costs of providing services. This is intended to allow these businesses to attract sufficient funds for investment, while not receiving a higher return than a firm operating in the same industry and facing similar risks would face in a competitive market. TNSPs also face various incentives to make efficient and timely investment decisions, within the constraints of investor preferences.

In this context, the Commission has considered:

- whether there is a barrier in the regulatory framework to TransGrid financing its share of ISP projects, and
- whether the changes to the regulatory framework proposed by TransGrid would better promote efficient investment relative to current arrangements.

Regarding the first point, the Commission considers the current regulatory framework provides TNSPs, including TransGrid, with a reasonable opportunity to recover their efficient financing costs. Under the current rules, the AER has duties to remunerate networks' efficient costs and it does so by measuring the cost of capital of the benchmark efficient entity at the notional gearing. Importantly, there is no obligation on TNSPs to finance investments at the notional gearing, whatever the profile of their capital expenditure;[221] rather, the current regulatory framework provides TNSPs with sufficient flexibility to adapt their capital structures to their circumstances overtime.

Regarding the second point, the Commission does not consider that the proposed changes are required to promote efficient investment decisions in the near term, or that it is the best long term option to address potential future investment issues. The regulatory framework provides TNSPs as a whole with an opportunity to recover at least their efficient costs. Within their portfolios of RAB investments, some assets may be riskier than others and therefore require higher returns. When considering incentives for efficient investment, the Commission notes that the correct test is at entity level, not project level.

For these reasons, the Commission does not consider that implementation of the proposed changes will promote efficient investment relative to the current arrangements. If anything, the Commission considers that the proposed changes would likely be detrimental to efficient investment for the following reasons:

- Allowing for a separate RAB with different arrangements to apply to TransGrid's share of ISP projects could potentially distort:
  - Capital markets, by incentivising funds to flow to TransGrid's ISP projects and away from other similar ISP projects. This, in turn, may impact efficient investment to the detriment of consumers.

221 Indeed, as noted by CEPA, the regulatory framework anticipates that heavy investment programmes may be accompanied by lower gearing.

- TNSP behaviour, by creating an incentive to undertake investment only when it is an actionable ISP project.
- Removing or weakening the inflation linkage by removing indexation of the RAB may also weaken investment incentives from onshore and offshore investors, in particular equity investors seeking to invest in capital growth assets. As noted by CEPA, an important reason why investors have been attracted to Australian energy network infrastructure is because of the inflation protection that it offers.

6.4.6 Impact on consumers

The Commission has considered whether there are benefits to consumers from the proposed changes to the regulatory framework. Having regard to its own analysis and the advice provided by CEPA, the Commission does not consider that consumers are likely to be better off if the participant derogation is made.

While close to being NPV neutral (with the exception of the tax allowance), the proposed changes would result in payments for TransGrid's share of ISP projects being weighted towards the early period of an asset's life, substantially increasing costs for consumers in the near to medium term, with lower prices later in the life of the asset.

As estimated by CEPA, between 2020-2035, the price impact of PEC on TransGrid's (and ElectraNet's) customers would be, on average, 0.05 cents/kWh (real 2018$) higher under the derogation compared to the status quo, across the period. This price impact becomes larger if additional ISP projects are considered.

The AER also estimates that, between 2023-2028 (TransGrid's next regulatory control period), the investment in the NSW portion of PEC will increase the transmission component of residential customer electricity bills in NSW by $19 per annum under the current rules, and $26 per annum if the proposed derogation is made.[222]Importantly, this analysis of the consumer impact of the proposed changes does not include TransGrid's other ISP projects such as Humelink or VNI Minor and so is also likely to materially understate the impact on consumers of the proposed changes.[223]

More generally, the bringing forward of revenues through the changes proposed by TransGrid would:

- results in current consumers paying for investments before those investments are delivering services, and
- results in current consumers paying for services that will be provided to future consumers.

Intergenerational equity is not an objective that the AEMC is explicitly required to have regard to when making its decisions. However, the Commission is required to have regard to the long term interests of consumers. Where consumers value intergenerational equity, and

222 AER, Preliminary Position, TransGrid Contingent Project, Project EnergyConnect, December 2020, p. 1.

223 In addition, the Commission notes that any future requests for similar participant derogations from other TNSPs and DNSPs could increase these customer impacts significantly, if successfully.

where any transfer of wealth between current and future customers impacts economic efficiency, then this is within the AEMC's remit to consider.

In respect of the first point, consumer groups have indicated (through their submissions and in other forums with the AEMC) that they do value intergenerational equity as well as arrangements which support the alignment of prices with the receipt of benefits.[224] In respect of the second point, the proposed changes would result in a material move away from the current alignment of the profile of revenues with the benefits of TransGrid's ISP projects which is likely to have a detrimental impact on the current efficient profile of prices.

BOX 3: PEC BENEFITS AND THE NSW ROADMAP

This Box provides a brief overview of the potential monetised and non-monetised benefits from the PEC project.

- FTI estimates gross benefits under the RIT-T framework of $1.6 billion in NPV over 2020-2040 with an implied break-even cost of $3.0 Billion. These benefits are primarily based on avoided variable cost.
- Net consumer benefits of $7.1 to $11.9 Billion, arising from the material reduction in wholesale prices in all NEM regions. This is an overall decrease in wholesale prices of between $7/MWh/year from 2020 to 2040. This is equivalent of savings of between $34 to $100 per year for NSW households.
- Additional non-monetised benefits reflecting the strategic importance of Project Energy Connect. These include:
  - support integration of renewables
  - connecting complementary generation mixes ins SA and NSW
  - contributing to security of supply
  - interconnectors are likely to reduce frequency of system stress events
  - reducing frequency with which FCAS needs to be procured
  - increase access to cheaper FCAS services in other regions
  - reducing price of FCAS

The NSW Government announced the NSW Roadmap in November 2020. The Roadmap includes 12 GW of new VRE and 2 GW of long-term storage (8 hours) in the NSW region by 2030.

Without undertaking detailed modelling it is difficult to predict the impact of this new capacity on the modelled benefits of PEC.

At a high level, the Commission would expect that output from new wind and solar generation in NSW would be positively correlated with wind and solar output in SA. As this new generation would have zero (or near zero) marginal cost this could reduce the price

224 For example, see EUAA, MEU, ERM Power, PIAC, ECA submissions to the consultation paper.

differential between NSW and SA during periods of high solar and wind generation. As most of the benefits of interconnection are driven by price differentials between regions, the Commission might expect that the modelled benefits of PEC with the NSW Roadmap would decrease relative to a world without the Roadmap.

Source: FTI Consulting, Assessing the benefits of interconnectors, 2020. NSW Roadmap, November 2020.

The proposed changes (in combination) would also result in current consumers facing larger price increases relative to the price increases experienced by future customers, each time TransGrid begins construction of an actionable ISP project. The Commission considers that the price volatility subsequently experienced by current customers attributable to these sharper increases would not be in their long term interests, particularly as it is stable prices that allow consumers to make informed decisions as to their energy spending and usage.

Finally, the Commission considers that it is in the long run interests of consumers that they continue to be confident that the TNSPs will be able to maintain service quality and reliability in the future. Making the proposed changes to the rules, in particular the removal of the RAB indexation, would mean that there would be an increased risk that TNSP's do not generate enough cash in the future to maintain, augment and replace assets. This is also unlikely to be in consumers interests.

6.4.7 Revenue and pricing principles

As explained in chapter 3, in applying the rule making test, the Commission has also taken into account the revenue and pricing principles in the NEL, when considering whether to accept the rule change request.

The Commission's analysis indicates that the current arrangements are consistent with these principles. In particular, the revenue and pricing principles, together with the rate of return objective,[225] do not require the regulatory framework to ensure that a TNSP can achieve a particular investment profile at the notional gearing and/or credit rating of a benchmark efficient entity.

In addition, and in response to the proponents who considered not making the derogation would risk underinvestment in the network, as explained above, the Commission does not consider implementation of the proposed changes would promote efficient investment relative to the current arrangements.

6.5 Conclusions

Based on current information, the Commission considers the regulatory framework does not create a barrier to financing TransGrid's share of actionable ISP projects (including PEC).

225 Clauses 6.5.2(c) and 6A.6.2(c) of the NER specify that the allowed rate of return objective is that the rate of return for a service provider is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the service provider in respect of the provision of standard control services.

Nevertheless, the Commission has assessed the proposed rule against the NEO to understand the potential impact of the proposed changes on the long term interests of consumers and therefore the suitability of the proposed solution to address financeability of ISP projects, should an issue arise in the future.

The Commission is not satisfied that the proposed participant derogation which would bring forward revenue recovery for TransGrid's share of current and future actionable ISP projects will, or is likely to, contribute to the achievement of the NEO. The Commissions reasons are as follows:

- **Risk allocation:** By applying depreciation as incurred and an unindexed RAB to TransGrid's share of current and future ISP projects, the proposed rule would transfer some risks — in particular, inflation risk and completion risk — from TransGrid to consumers who are not best placed to manage these risks.
- **Regulatory framework:** The proposed rule would represent a significant departure from established principles of regulation in Australia. It has the potential to undermine the AER's role in administrating the regulatory framework, introduce substantial regulatory uncertainty to TNSPs not covered by this rule change and distort the achievement of efficient outcomes in both the NEM and financial markets by tilting the playing field towards TransGrid and its ISP projects relative to other TNSPs and non-network providers.
- **Regulatory compliance and administration costs:** The proposed rule would significantly increase complexity in the application of the regulatory framework by both requiring the management of alternative classes of assets within the regulatory framework and ensuring the RORI appropriately applies for both nominal and real rates of return. The likely need to create a second RAB for TransGrid for its share of ISP projects would also result in the AER incurring increased administrative costs.
- **Efficient operation of electricity services:** The proposed rule is unlikely to promote efficient operation of the power system relative to the current arrangements. Specifically, the depreciation component of the proposed rule could weaken incentives for TransGrid to deliver projects to time by providing it with income from a project prior to its completion. This is unlikely to be in the long-term interests of consumers.
- **Efficient investment in electricity services:** The economic regulatory framework currently already provides TransGrid with a reasonable opportunity to recover its efficient financing costs, and therefore currently supports efficient investment in electricity services. The application of the proposed changes to TransGrid's share of ISP projects only is likely be detrimental to efficient investment in electricity services by tilting the playing field towards TransGrid and away from other proponents and similar ISP projects, and weaken investment incentives on onshore and offshore equity investors seeking capital growth by removing the linkage to, and hence protection from, inflation. Removing the RAB indexation could also cause a financeability issue in the future as the value of the RAB stops being indexed by inflation every year.
- **Impact on consumers:** While being NPV neutral from TransGrid's perspective, the proposed rule would result in payments for TransGrid's share of ISP projects being

weighted towards the early period of an asset's life, substantially increasing costs for consumers in the near to medium term, with lower prices later in the life of the asset. The proposed rule would also create an intergenerational wealth transfer between current and future customers, remove the link between the inflation component of network charges and the inflation component of the income of users of electricity and move away from the current alignment between the profile of revenues to TransGrid for its share of ISP projects with the timing of benefits to consumers in respect of these projects.

ABBREVIATIONS

ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
BAU	Business as usual
Capex	Capital expenditure
Commission	See AEMC
CPI	Consumer price index
NEM	National electricity market
NEL	National Electricity Law
NEO	National electricity objective
NER	National Electricity Rules
NPV	Net present value
NSP	Network service provider
PADR	Project assessment draft report
PEC	Project EnergyConnect
Proponent	TransGrid
PTRM	Post tax revenue model
RAB	Regulatory asset base
RFM	Roll forward model
RPP	Revenue and pricing principles
Rules	See NER
TNSP	Transmission network service provider
VNI	Victoria New South Wales Interconnector
WACC	Weighted average cost of capital

A LEGAL REQUIREMENTS UNDER THE NEL

This appendix sets out the relevant legal requirements under the NEL for the AEMC to make this draft rule determination.

A.1 Draft rule determination

In accordance with s. 99 of the NEL the Commission has made this draft rule determination in relation to the rule proposed by TransGrid.

The Commission has determined not to make a draft rule.

The Commission's reasons for making this draft rule determination are set out in sections 3.4 and 3.5 of this determination, and in more detail in Chapters 4 to 6.

A.2 Commission's considerations

In assessing the rule change request the Commission considered:

- it's powers under the NEL to make the rule
- the rule change request
- submissions received during first round consultation
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.[226]

A.3 Northern Territory

From 1 July 2016, the NER, as amended from time to time, apply in the Northern Territory, subject to derogations set out in regulations made under the Northern Territory legislation adopting the NEL (referred to here as the NT Act).[227]

The NT Act provides for an expanded definition of the national electricity system in the context of the application of the NEO to rules made in respect of the Northern Territory, as well as providing the Commission with the ability to make a differential rule that varies in its terms between the national electricity system and the Northern Territory's local electricity system.

The Commission has determined not to make a draft rule and, consequently, has not made a differential rule in respect of the Northern Territory.

226 Under s. [33 of the NEL/ 73 of the NGL/ 225 of the NERL] the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011, the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated council is now called the COAG Energy Council.

227 NT Act: National Electricity (Northern Territory) (National Uniform Legislation) Act 2015. Regulations: National Electricity (Northern Territory) (National Uniform Legislation) (Modifications) Regulation.

B CREDIT RATINGS TYPES AND MEANINGS

Table B1 shows how the credit ratings of Moody's and Standard & Poor's compare.

Table B.1: Credit rating comparison Moody's and S&P

S&P'S	MOODY'S	GRADE
AAA	Aaa	Prime
AA+	Aa1	High grade
AA	Aa2	High grade
AA-	Aa3	High grade
A+	A1	Upper medium grade
A	A2	Upper medium grade
A-	A3	Upper medium grade
BBB+	Baa1	Lower medium grade
BBB	Baa2	Lower medium grade
BBB-	Baa3	Lower medium grade
BB+	Ba1	Non-investment speculative
BB	Ba2	Non-investment speculative
BB-	Ba3	Non-investment speculative
B+	B1	Highly speculative
B	B2	Highly speculative
B-	B3	Highly speculative
CCC+	Caa1	Substantial risk
CCC	Caa2	Extremely speculative

Source: Moody's and Standard & Poor's