AEMC

RULE

Australian Energy Market Commission

CONSULTATION PAPER

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

PROPONENT
TransGrid - ERC0320

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

PROPONENT
ElectraNet - ERC0322

5 NOVEMBER 2020

INQUIRIES

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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.

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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.[1,2]

Specifically, TransGrid is seeking the following changes to the National Electricity Rules (NER or Rules):[3]

- 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.

Importantly, 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 project.[4]

ElectraNet is seeking equivalent changes to the NER for its share of ISP projects. Specifically, the proposed changes would:[5]

- provide a nominal rate of return on an unindexed RAB for actionable ISP projects, and
- remunerate capex for actionable ISP projects as it is incurred rather than when the project is commissioned.

The rule change requests are available on the AEMC's website.[6]

Both 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 does not consider that the rule change requests meet the test for an "urgent rule" in the NEL. The Commission will therefore progress the rule change requests under a standard rule change process but will treat these rule change requests as a priority and work to the accelerated timeframe outlined in Table 1.1 below.

1 ISP projects are projects to augment the transmission system identified as part of the ISP prepared by the Australian Energy Market Operator (AEMO).
2 Project code ERC0320.
3 TransGrid, rule change request, pp 6-7.
4 Project code ERC0322.
5 ElectraNet, rule change request, p. 15.
6 www.aemc.gov.au.

Table 1.1: Key dates for TransGrid's and ElectraNet's rule change requests

MILESTONE	DATE
Submissions on consultation paper	3 December 2020
Draft rule determination	21 January 2021
Submissions on draft rule	4 March 2021
Final rule determination	31 March 2021

The timeframes that stakeholders have to consider and respond to the matters raised in the requests will stay the same as those used under the standard rule making process.[7]

If the rule change requests, or submissions to the requests, raise issues of sufficient complexity or difficulty, or if there is a material change in circumstances, the Commission may revert to the standard timeframes.[8]

This consultation paper has been prepared to facilitate public consultation on the rule change requests and to seek stakeholder feedback on the key issues raised by the proposals.

In this paper:

- Chapter 2 provides relevant background information
- Chapter 3 provides a summary of the proponents' rule change requests
- Chapter 4 explains the Commission's assessment framework
- Chapter 5 identifies a number of questions and issues to facilitate the consultation on this rule change request and
- Chapter 6 outlines the process for making submissions.

7 Stakeholders are invited to make comments on this approach in submissions to this paper.

8 The standard rule change process runs for approximately six months (26 weeks) from the date of initiation of the relevant rule change request.

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.[9] In New South Wales and South Australia, these projects include major investments in transmission infrastructure. These and future ISP projects are the subject of the TransGrid and ElectraNet rule change requests.

The purpose of this chapter is to provide background relevant to the TransGrid and ElectraNet rule change requests. Specifically, this chapter describes:

1. the ISP and what projects are covered under these rule change requests
2. the economic regulatory framework applied to transmission businesses and why it is important for investment, and
3. financeability, and what is meant by financeability, in the context of these rule change requests.

2.1 ISP projects relevant for this rule change request

The first Integrated System Plan was prepared by AEMO and endorsed by the Council of Australian Governments (COAG) Energy Council in 2018.[10] 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. The ISP is updated every two years and the latest version, the 2020 ISP, was released on 30 July 2020.[11]

The ISP 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.

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:[12]

- Victoria New South Wales Interconnector (VNI) minor. In progress, expected completion in 2022–23.

9 AEMO, *2020 Integrated system plan*, July 2020.

10 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.

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

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

- Project EnergyConnect (PEC). Investment decision by no later than January 2021 for PEC to be in place by 2022. 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. Investment decision by late 2021 for HumeLink to be in place in time for the completion of Snowy 2.0 in 2025.
- Central West Orana REZ transmission link. Construction expected to start by the end of 2022.
- VNI West, Project Assessment Draft Report (PADR) expected in December 2020 and delivery by 2027–28.

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.[13]

For South Australia, the current actionable ISP project is ElectraNet's part of PEC. ElectraNet estimates its investment in PEC to be $474 million.[14]

The proposed participant derogations by TransGrid and ElectraNet 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 these requests), as well as any actionable ISP projects identified for New South Wales and South Australia in future ISPs. Grid expansions to accompany the timely development of renewable energy zones (REZs)[15] could potentially also be captured by the proposed participant derogations.

2.2 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.[16]

2.2.1 Framework Design

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[17] with reference to a hypothetical efficient firm. The framework does not consider actual businesses, including their capital structure, actual debt costs or profitability.

13 TransGrid, rule change request, p. 9.

14 In its rule change request, ElectraNet also refers to other significant, committed transmission projects in South Australia, including: the Eyre Peninsula Reinforcement, which is an approved $283 million contingent project; and the Main Grid System Strength project, which is an approved $183 million contingent project to install four high-inertia synchronous condensers to address the system strength gap in South Australia. ElectraNet, rule change request, p.14.

15 AEMO, ISP 2020, pp 60-61.

16 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.

17 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).

BOX 1: ECONOMIC REGULATION OF NATURAL MONOPOLIES

Transmission networks display **natural monopoly** characteristics. In the absence of normal competitive forces, a monopoly firm is able to increase the price above the competitive level, leading to potentially substantial 'monopoly rents'. In addition, in the absence of competitive pressures the owners of the monopoly firm have a harder time inducing the management to perform—that is, to minimise expenditure and to continuously innovate. As a result, an unregulated monopolist tends to be less efficient and to charge higher prices than an otherwise equivalent competitive firm.

The objectives of economic regulation of natural monopolies are to:

- ensure that the regulated firm provides the range of services consumers desire, at the quality they desire and continually develops new services or enhances quality when it is efficient to do so
- ensure that the regulated firm produces the desired services at least cost (in present value terms) and continually explores new ways of reducing expenditure
- ensure that services are priced so that they are utilised efficiently.

Generally, 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.

The AER's rate of return estimate is based on the market **cost of capital** (or weighted average cost of capital (WACC)) for an investment with a similar degree of risk as that which applies to a service provider in respect of the provision of regulated services.

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.

Source: Australian Competition and Consumer Commission (ACCC), Statement of regulatory principles for the regulation of transmission revenues, Background paper, 8 December 2004, pp 12-14.
Source: AER, Overview of better regulation package, April 2014, p. 15.
Source: AER, rate of return instrument, 2018.

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 AER's regulatory model compensates for inflation by combining a nominal rate of return with an indexed RAB. The AER then applies a negative revenue adjustment to avoid double compensation on the inflation component of returns. This effectively means that a TNSP receives a real rate of return rather than a nominal rate of return. This is necessary because otherwise compensation for inflation is provided twice - through both the indexed RAB and the nominal rate of return. It makes this negative revenue adjustment through the depreciation component and this results in an identical revenue outcome to the real rate of return approach.[18]

This approach also ensures that regulated revenues are net present value (NPV) neutral over the life of an asset. Changing to an unindexed RAB would make the negative adjustment to depreciation redundant and consequently a nominal rate of return would be applied to a nominal (unindexed) RAB.

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.[19]

BOX 2: THE AER'S ROLL FORWARD AND POST TAX REVENUE MODELS

To calculate each building block, the AER uses the roll forward model (RFM) and post tax revenue model (PTRM).

The **RFM** establishes the method used to roll forward the RAB — that is, increase or decrease from the previous value, from one regulatory period to the next and from one year to the next in the same regulatory period.

18 AER, Why do we index the regulatory asset base, undated.

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

The roll forward of the RAB from year-to-year reflects:

- additions for actual net capex
- reductions for depreciation (based on approved asset lives and methods)
- indexation for actual inflation
- other adjustments or true-ups required under certain circumstances in accordance with the NER.

The role of the **PTRM** is to determine the total revenue requirement for TNSPs by calculating each building block then adding the building blocks to determine the annual revenue requirement each year within the regulatory control period. The PTRM also smooths the revenue profile over the regulatory period so that the expected revenue over the regulatory control period equals the total revenue requirement (in net present value terms).

Inflation is a particularly important input into the building block components:

- The RAB is adjusted each year for inflation plus new assets, less depreciation and asset disposals.
- The return on capital building block applies a nominal rate of return to the RAB. The nominal rate of return includes expected inflation.
- The regulatory depreciation building block provides revenue to compensate for the depreciation of assets over time.
- Under the PTRM, inflation is accounted for twice - both as an annual adjustment to the RAB and also through the rate of return. In order to offset this double recognition of inflation, an amount equivalent to the annual inflation adjustment of the RAB is subtracted from the annual regulatory depreciation compensation paid to TNSPs.
- Other building blocks (such as opex) include an inflation component, as the costs forecast in real dollar terms are escalated to nominal dollars using expected inflation in determining the required nominal revenues.

Source: AER, Discussion paper, treatment of regulatory inflation, May 2020.
Source: AER, Final amendment, Post tax revenue model handbook, final decision, April 2019.
Source: NER, sections 6A.6.1(e), 6A.6.3, schedule 6A.2.

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.

As part of the AER's recent review of the treatment of inflation, Sapere demonstrated that the AER's real model successfully delivers the current target rate of return and recommended that the AER should not target a nominal rate of return instead:[20]

20 Sapere, Target return and inflation, June 2020, p. 30.

The long-term interests of consumers requires that investors can expect real returns on capital ex-ante and that these returns are able to be achieved ex post. The AER targets a real rate of return on capital; its approach allows NSPs to achieve the targeted real return on capital ex-post, and to be compensated for outturn inflation. The AER approach is therefore consistent with the regulatory objectives.

2.3 Financeability of transmission assets

Financeability refers to the capacity of 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 economic regulatory model should provide for longer-term financial sustainability because it allows TNSPs to recover its efficient costs through annual revenue allowances. However, large lumpy investments and delayed returns could mean that TNSPs encounter short-term financeability issues.

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).[21]

In its rule change request, TransGrid gives two reasons why its proposed rule, by improving financeability, supports the NEO:[22]

1. the change 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.
2. without the rule change, there is a "*serious risk that the ISP projects may not be delivered, or are not delivered in a timely manner.*"

TransGrid also suggests that its proposed rule supports the revenue and pricing principles in the NEL because it:[23]

- provides a benchmark efficient entity with a reasonable opportunity to recover at least the efficient costs it incurs in providing network services, because the cash flows generated are sufficient to maintain access to investment grade debt and associated interest rates
- provides more effective incentives to promote economic efficiency, including efficient investment in the transmission system
- supports 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.

21 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).

22 For details see section 5.2 of TransGrid's rule change proposal.

23 For details see section 5.3 of TransGrid's rule change proposal.

ElectraNet, in its rule change request, provides similar commentary to TransGrid regarding the impact of its proposed rule on the NEO and revenue and pricing principles.[24] With reference to the revenue and pricing principles in the NEL, ElectraNet notes that:[25]

> ... the Rule change will address the risk that actionable ISP projects may not proceed because finance is either unavailable or too expensive.

When considering financeability a number of factors are important, including:

- the benchmark gearing level
- the role of credit ratings; and
- timing of projects and associated cash flows.

2.3.1 Benchmark gearing level and cost of debt

The AER provides TNSPs with an allowed return on debt to cover the efficient borrowing costs they are expected to incur funding capital investments in their network. The total amount of expected debt funding is based on the AER's benchmark gearing level of 60 percent and the regulated rate of return is determined with reference to the benchmark gearing level and not the actual gearing level of an individual TNSP. For example, TransGrid's latest publicly available actual gearing, calculated as net debt divided by the regulated and contracted asset base (RCAB) ratio is 79.8 percent,[26] but the regulated rate of return it recovers through the annual revenue is based on the benchmark gearing level of 60 percent.

The AER applies a benchmark incentive approach, where a TNSP retains the benefit if it is able to keep costs, including financing costs, below the AER's forecast of efficient costs. Equally, TNSPs bear the costs if actual costs exceed the efficient benchmark.

2.3.2 Role of credit ratings

Credit ratings are determined by independent credit rating agencies. The credit rating of a TNSP will ultimately be an important factor in determining its cost of debt. One of the credit rating agencies, Moody's uses four key rating factors. These constitute its analytical framework for rating regulated energy network. The key factors are:

- regulatory environment and asset ownership
- investment plan and the associated execution risk
- financial policy
- key financial metrics.

24 ElectraNet, rule change request, Chapter 5.
25 ElectraNet, rule change request, p. 18.
26 Spark Infrastructure, Investor presentation, half-year 2020, August 2020, p.15.

Table 2.1: **Moody's credit rating methodology**

FACTOR	FACTOR WEIGHTING	SUB-FACTOR WEIGHTS
Regulatory environment and asset ownership model	40%	1. Stability and Predictability of Regulatory Regime (15%) 2. Asset Ownership Model (5%) 3. Cost and Investment Recovery (15%) 4. Revenue Risk (5%)
Scale and complexity of capital program	10%	Scale and Complexity of Capital Program (10%)
Financial policy	10%	Financial Policy (10%)
Leverage and coverage	40%	1. Funds from operations (FFO) Interest Coverage (10%) 2. Net Debt / RAB (12.5%) 3. FFO / Net Debt (12.5%) 4. Regulated cash flows (FFO minus dividends) / Net Debt (5%)

Source: Moody's, *Rating methodology regulated electric and gas networks*, March 2017.

Table 1.1 shows that **40 percent** of the credit rating framework focuses on the regulatory environment and asset ownership model.

This includes considerations on how developed and transparent the regulatory framework is; the strength of the political and legal underpinnings of the regulatory framework; the regulator's track record for predictability and stability in terms of decision-making and its independence from political interference. In addition, this sub-factor also considers the effectiveness of the independent body or legal system that can arbitrate disputes between a regulator and a regulated company in a timely fashion.[27]

Financial metrics constitute **40 percent** of the credit rating framework and funds from operations over net debt, the ratio TransGrid and ElectraNet submissions focus most on, constitute 12.5 percent of the overall credit rating assessment.

The other two factors, scale and complexity of capital program and financial policy, are both qualitative factors, implying that in conjunction with the regulatory environment and asset ownership model factor, qualitative factors make up **60 percent** of the overall credit rating assessment.

27 Moody's, *Rating methodology regulated electric and gas networks*, March 2017, p. 8.

The AER uses a benchmark credit rating to determine the allowed cost of debt allowance. For example, the current benchmark credit rating is Baa1 (or BBB+) and TransGrid and Electranet are rated Baa2 (BBB), which is lower than the benchmark credit rating.

Temporary divergences outside of the above metrics may also not be as significant, particularly if there is a clear path back.

Other ratings agencies will adopt their own metrics and methodologies.

3 DETAILS OF THE RULE CHANGE REQUEST

The AEMC has received two rule change requests - from TransGrid and from ElectraNet - both in the form of a participant derogation and both proposing amendments to the NER in relation to the financeability of ISP projects:

- TransGrid submitted its rule change request on 30 September 2020.
- ElectraNet submitted its rule change request on 23 October 2020.

TransGrid and ElectraNet (the proponents) claim that these rule change requests are necessary to enable them to establish finance for their actionable ISP projects. The rule change requests propose changes to the economic regulatory framework to remove indexation of the RAB and to allow depreciation to be recognised on an 'as incurred', rather than 'as commissioned', basis. The proponents argue that these changes will bring forward the revenues necessary to finance actionable projects of the ISP while maintaining NPV-neutrality.

This chapter sets out:

- the issues raised by the proponents in the rule change requests, and
- details of the proponent's proposed solution to these issues.

TransGrid's rule change request is accompanied by proposed rule drafting.[28] ElectraNet's rule change request also includes a proposed rule.[29]

3.1 Issues raised in the rule change request

The proponents claim that the current economic regulatory model does not allow them to obtain the finance necessary to build and commission their actionable ISP assets.

TransGrid

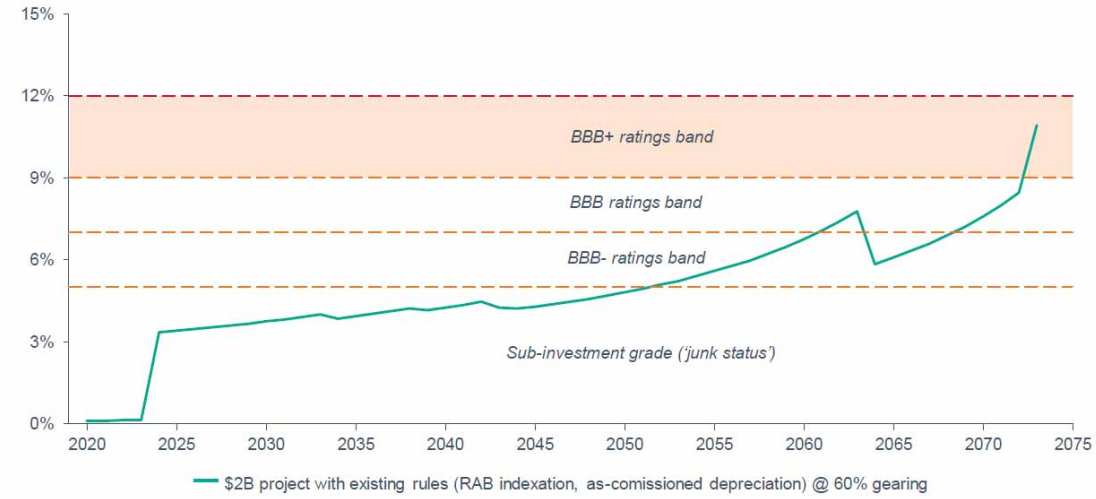
TransGrid states that, in the course of its assessment of Project EnergyConnect (PEC), it has identified that the current economic regulatory framework in the NER results in significant financing issues with the ISP projects.[30] These issues arise due to:

- the unprecedented size and scale of the ISP projects, as well as their timing, which would require investment in the ISP projects to be delivered concurrently
- 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)
- the revenue stream for the ISP projects being much more back ended than TransGrid's existing asset base due to projects having much longer asset lives, and
- recovery of revenue for depreciation not being able to be commenced until projects are commissioned.

28 TransGrid, proposed rule drafting, available at www.aemc.gov.au.
29 ElectraNet, rule change request, Appendix 1, p. 25.
30 TransGrid, rule change request, p. 3.

Figure 3.1 shows the revenue profile of a notional $2 billion project under the current economic regulatory framework and the predicted credit rating based on TransGrid's assessment of the FFO/net debt financial metric.

Figure 3.1: Existing economic regulatory framework

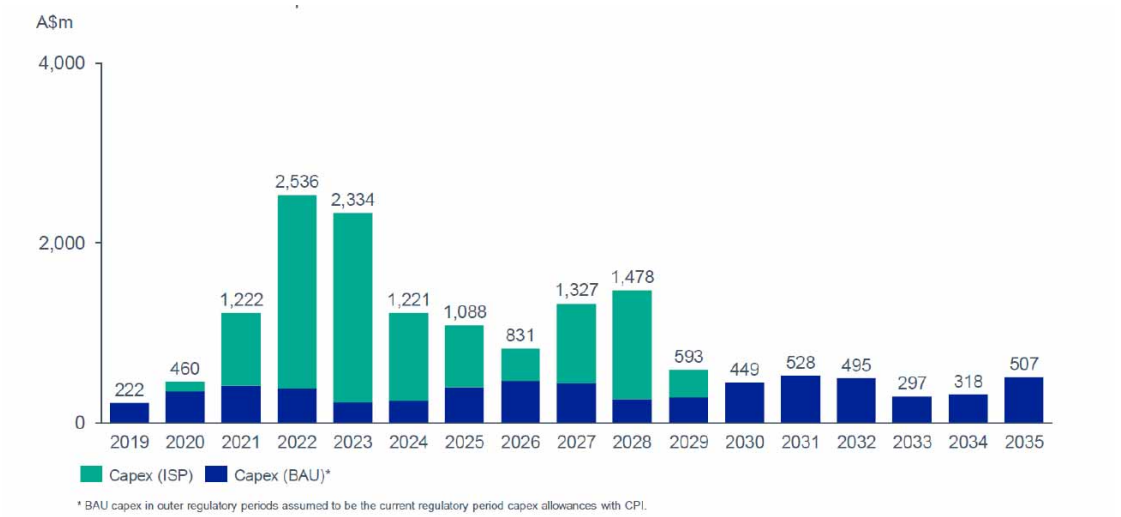


Source: TransGrid, rule change request, 30 September 2020, p. 15.

TransGrid claims that it faces significant capital expenditure as a result of AEMO's ISP, as compared to business as usual (BAU). Figure 3.2 compares TransGrid's expected BAU and ISP related capital expenditure until 2035.[31]

31 TransGrid, rule change request, p. 10.

Figure 3.2: Expected capex



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

TransGrid considers the size of expected ISP capex and the current economic regulatory framework have a number of implications for its ability to finance its part of actionable ISP projects:[32]

- 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 claims that financing its share of ISP projects is likely to require investments between $9 to $10 billion over the next ten years.[33] Noting TransGrid's current RAB of approximately $6.4 billion, this would represent more than a doubling of its regulatory asset base.

32 TransGrid, rule change request, pp. 14- 15.

33 TransGrid, rule change request, p. 9.

TransGrid notes that the consumer savings from ISP investments across the NEM are expected to be around $11 billion over the next 20 years.[34] 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.[35]

ElectraNet

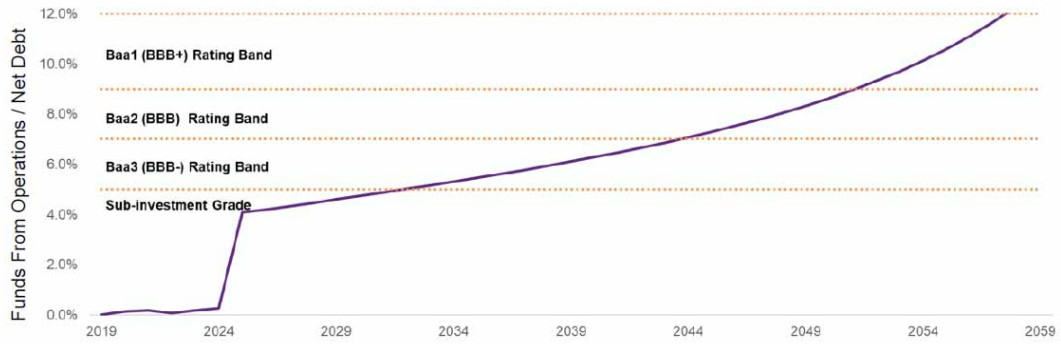
ElectraNet is of the view that it shares the challenges faced by TransGrid. It has therefore lodged an equivalent rule change request - also in the form of a participant derogation - in relation to its share of actionable ISP projects, with a particular focus on Project EnergyConnect.[36]

TransGrid and ElectraNet are partners in this project, which has a total expected cost of $2.4 billion. ElectraNet's share of the project is expected to be $474 million.[37]

While ElectraNet's total investment in the PEC is considerably less than TransGrid's, it notes that the total value of ElectraNet's recent contingent projects is $940 million of which $474 million is expected for PEC investments.[38] The sum of all contingent projects, $940 million, will add over 34 percent to ElectraNet's projected RAB as at 30 June 2023.[39]

ElectraNet undertook analysis to show the notional credit rating for the PEC on a standalone basis, assuming the current revenue setting arrangements apply. Figure 2.3 shows that the benchmark credit rating of BBB+ would not be achieved for over 30 years.

Figure 3.3: ElectraNet stand-alone PEC investment ($500 million) expected credit ratings



Source: ElectraNet, rule change request, p. 14.

Referring to the analysis shown in Figure 2.3, ElectraNet claims that there is an inconsistency in the current revenue setting process which adopts a BBB+/Baa1 benchmark credit rating,

34 TransGrid, rule change request, p. 27.
35 AEMO, ISP 2020, July 2020, pp 96-97.
36 ElectraNet, rule change request, p.3.
37 ElectraNet, rule change request, p.6.
38 Project EnergyConnect is $474 million; the Eyre Peninsula Reinforcement is $283 million; and the Main Grid System Strength project is $183 million.
39 ElectraNet, rule change request, p.14.

but provides a revenue stream that is unable to sustain it. This, according to ElectraNet, is caused by specific aspects of the current economic regulatory model:[40]

> ...the deferral of revenue in relation to new projects, particularly those involving long asset lives such as transmission lines. Such deferral of revenue does not raise any concerns if the TNSP is able to maintain its credit rating, consistent with the benchmark assumptions. For large new projects, however, such as Project EnergyConnect, the delay in revenue recovery may lead to a downgrading in a TNSP's credit rating.

ElectraNet notes that Independent modelling has put the consumer benefits of PEC at approximately $100 per household per year.[41]

3.2 Solution proposed in the rule change request

The rule change requests from TransGrid and ElectraNet propose equivalent changes to the NER to apply to each businesses' share of transmission projects identified in the ISP as actionable. The rule change requests are in the form of a participant derogation from Chapter 6A of the NER.

In practice, both rule change proposals, if made, would have the effect of:

- requiring the AER to roll forward the RAB for the proponent's share of the ISP projects 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.

Box 1 provides an overview of how the proposed changes would change the current regulatory framework with respect to the rate of return, the RAB and depreciation.

BOX 3: RATE OF RETURN AND DEPRECIATION

Under the current economic regulatory framework for transmission assets, the AER compensates investors by using a real rate of return approach combined with a RAB that grows by inflation.

The rate of return

To achieve a real rate of return, the AER combines a nominal rate of return with a negative revenue adjustment. Because compensation for inflation is provided through both the RAB growth and a nominal rate of return, the negative revenue adjustment is needed to prevent double compensation for inflation. The AER makes this revenue adjustment through the

40 ElectraNet, rule change request, p.12.

41 ACIL Allen Consulting, *Project EnergyConnect: Updated Analysis of Potential Impact on Electricity Prices in South Australia*, 24 September 2020.

depreciation component, effectively delivering a real rate of return.

Under these current arrangements revenue is low early in an asset's life because the effective rate of return doesn't include inflation. Conversely revenue is higher later in the asset's life because the asset's value is indexed by inflation, so the depreciation rate and the allowed rate of return are applied to an increasing base.

Removing indexation from the RAB would, in effect, mean that a nominal rate of return is applied to a RAB that is not inflation adjusted, so there would be no double compensation and no requirement for a negative revenue adjustment to the depreciation allowance.

An unindexed RAB framework as proposed would mean that transmission networks would recover a greater proportion of revenues sooner. This would mean revenues and consumer prices would increase in the near to medium term relative to the current real rate of return model, but would be lower later on.

Depreciation

Depreciation is the allowance provided so capital investors recover their investment over the economic life of the asset (return of capital). The AER allows investors to start recovering depreciation once an asset is commissioned. This ensures that consumers do not pay for an investment before they reap its benefits.

Changing the depreciation allowance from 'as commissioned' to 'as incurred' as proposed would allow recovery of investments during the constructing phase of a project but also mean that consumers pay for a project before they receive the benefits. It could also remove incentives for the TNSP to complete the project in a timely manner.

Source: AER, *Why do we index the regulatory asset base?*, undated.
Source: AER, TransGrid transmission determination 2018-2023, Attachment 5, Regulatory depreciation, May 2018.

TransGrid

In its rule change request, TransGrid proposes changes to the NER which would:[42]

- remove indexation of the RAB for TransGrid's share of the ISP projects, and
- require that depreciation be calculated on capex on an 'as incurred', as opposed to an 'as commissioned', basis for TransGrid's share of the ISP projects.

TransGrid considers that the changes proposed in its rule change request:[43]

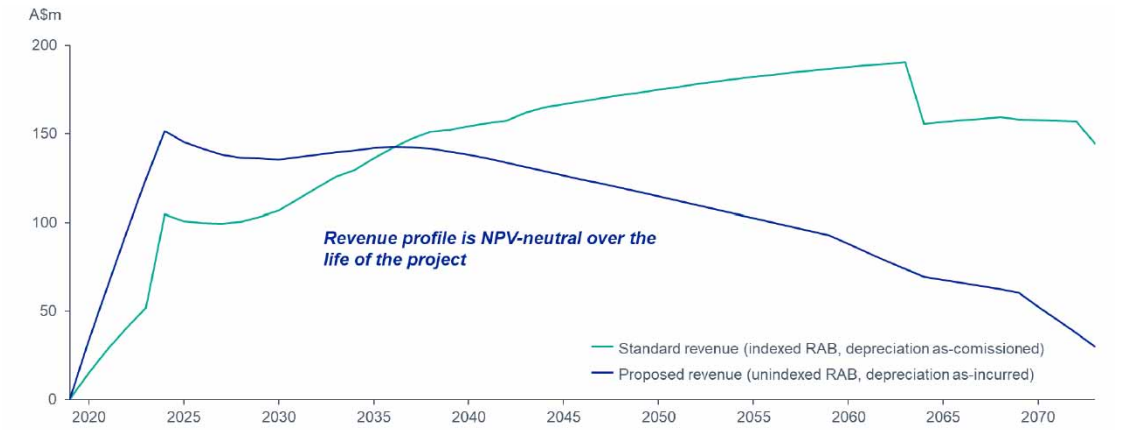
- will advance the NEO because they facilitate efficient investment in actionable ISP projects so that the proponents have the capacity to deliver on the service requirements that are demanded by consumers
- are consistent with the revenue and pricing principles in the NEL by providing a benchmark efficient entity a reasonable opportunity to recover at least the efficient costs

42 TransGrid, rule change request, p. 6.
43 TransGrid, rule change request, pp 28-30.

it incurs in providing network services,[44] promoting efficient investment in the transmission system[45] and reducing the risks of the potential for under and over investment.[46]

TransGrid's proposed changes to the economic regulatory framework would change the revenue profile it is allowed to recover from customers. Figure 3.3 shows the expected revenue for a $2 billion notional project, under the proposed changes compared to expected revenues under the current framework. Applying the proposed changes would mean that more revenue is front-ended as compared to the existing framework.

Figure 3.4: Revenue profiles

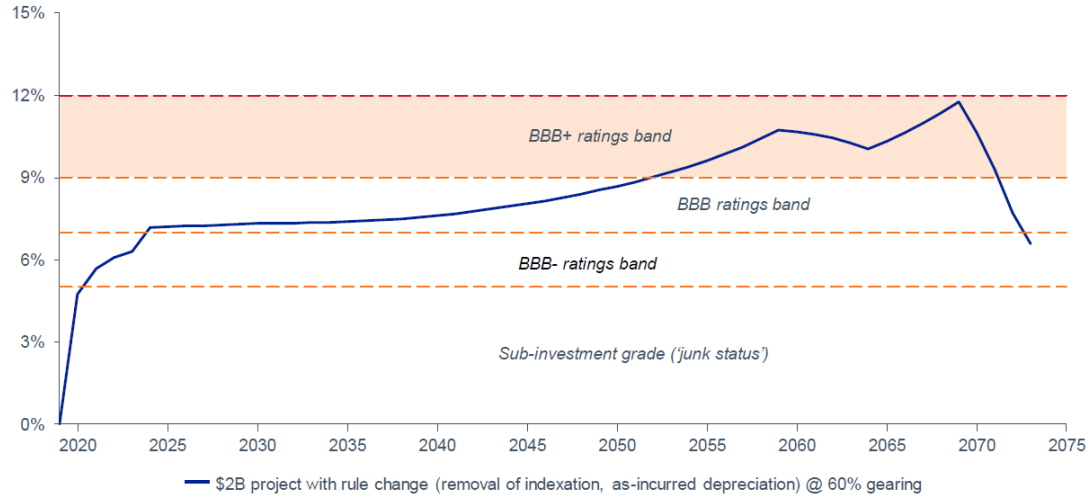


Source: TransGrid, rule change request, 30 September 2020, p. 14.

Making the proposed changes to the NER would, according to TransGrid, allow it to earn sufficient revenue to make the actionable ISP projects financeable. Figure 3.4 shows TransGrid projected credit rating based on the FFO/Net debt ratio only.[47]

44 Clause 7A(2) of the NEL.
45 Clause 7A(3) of the NEL.
46 Clause 7A(6) of the NEL.
47 For a more detailed explanation of the credit rating's process, please refer to Chapter 2, section 2.3.

Figure 3.5: FFO/net debt under proposed changes to NER



Source: TransGrid, rule change request, 30 September 2020, p. 5.

The rule change request provides for transitional arrangements to provide that it would apply to VNI minor and Project EnergyConnect (PEC), which are likely to have already commenced the contingent project process at the time the AEMC makes its decision on the rule change.[48]

TransGrid proposes to apply the participant derogation to all of its ISP projects until its current lease expires.[49]

ElectraNet

ElectraNet is seeking equivalent changes to the NER for its share of ISP projects. Specifically, the changes proposed by ElectraNet in its rule change request would:[50]

- provide a nominal rate of return on an unindexed RAB for actionable ISP projects, and
- remunerate capital expenditure for actionable ISP projects as it is incurred rather than from when the projects are commissioned.

ElectraNet considers that the proposed changes will contribute to the achievement of the NEO by addressing the financeability issue and putting downward pressure on the costs of finance compared to the status quo.[51] With respect to the revenue and pricing principles in the NEL, it notes that:[52]

48 On 30 September 2020, TransGrid and ElectraNet submitted final contingent project applications to the AER seeking increases in their allowed revenues to construct the new South Australia to New South Wales interconnector (Project EnergyConnect). See www.aer.gov.au for more information on the Project EnergyConnect contingent project application process.

49 In December 2015, the NSW State Government entered into a 99-year lease for TransGrid's electricity transmission network.

50 ElectraNet, rule change request, p. 15.

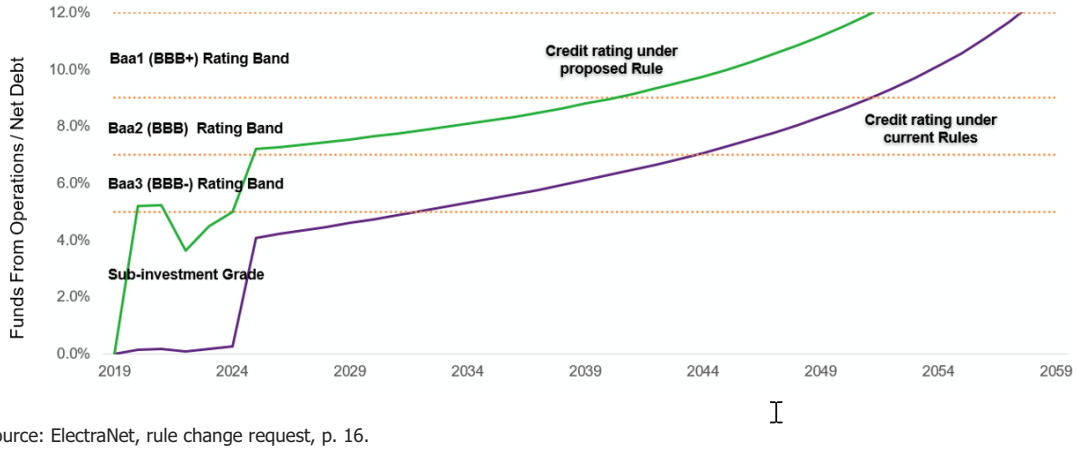
51 ElectraNet, rule change request, p. 18.

52 ElectraNet, rule change request, p.18.

the Rule change will address the risk that actionable ISP projects may not proceed because finance is either unavailable or too expensive.

ElectraNet says that its analysis demonstrates that the proposed participant derogation will be sufficient to address the financeability issues arising from Project EnergyConnect. It has provided analysis showing an improved outcome in relation to the notional credit rating for the PEC as a standalone project compared to the current Rules.

Figure 3.6: FFO/net debt under proposed changes to NER



Source: ElectraNet, rule change request, p. 16.

As with TransGrid, ElectraNet proposes to apply the participant derogation to all of its ISP projects until its current lease expires.

4 ASSESSMENT FRAMEWORK

This Chapter sets out the Commission's proposed approach in assessing the proponent's rule change request:

- Section 4.1 explains how the Commission will assess the rule change requests against the NEO
- Section 4.2 outlines how the Commission will consider the Revenue and Pricing principles of the NEL
- Section 4.3 explains why the Commission could consider a preferable rule
- Section 4.4 explains why the proponents' rule change requests will not apply in the Norther Territory.

4.1 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).[53] This is the decision-making framework that the Commission must apply.

The NEO is:[54]

> To promote efficient investment in, and efficient operation and use of, electricity services for the longer 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.

Based on a preliminary assessment of the rule change request, the Commission considers that the relevant aspects of the NEO are the efficient investment in, and use of, electricity services for the long-term interest of consumers with respect to:

- the price and security of supply of electricity, and
- the security of the national electricity system.

The Commission is proposing to use the following criteria to help assess whether the proposed rule is likely to promote the NEO:

- **impacts on economic regulatory framework:** projects are financed in accordance with the post tax revenue model. This model has a number of characteristics. It spreads costs out over time for consumers and provides a fair return over time for network service providers. The Commission will consider why ISP projects should be treated differently from other projects, what the capital market impacts are of applying a different regulatory framework to some transmission assets in selected NEM regions, what the temporal impacts are given the trailing average cost of debt arrangements and

53 Section 88 of the NEL.
54 Section 7 of the NEL.

whether a change to an unindexed RAB (nominal rate of return model) is in the long-term financial interests of consumers.

- **impact on consumers:** paying for investments before they are delivering services and weighting payments towards the early period of an asset's life will result in intergenerational wealth transfers, as current consumers pay for services that will be provided to future consumers. Increasing TUOS charges prior to benefits being delivered may also increase price volatility. The Commission will consider if there are benefits to consumers from the proposed changes to the regulatory framework. The Commission will also take into account the potential impacts on consumers if ISP projects cannot be financed.
- **impact on efficient investment:** the regulatory framework should provide TNSPs with a reasonable opportunity to recover their efficient costs. The Commission will consider whether transmission network operators are able to recover their efficient costs, taking into account the revenue and pricing principles set out in section 7A of the NEL.
- **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 will consider the potential for the proposed changes to transfer risk (for example, inflation risk and construction risk) between different parties (for example, TransGrid and ElectraNet, and consumers) and whether this allocation of risk is likely to result in efficient outcomes.
- **impact on the efficient operation of providing electricity services:** ISP projects should be delivered in a timely manner so that consumer benefits are not lost or deferred. The Commission will consider the impact of changes to the regulatory framework on the incentives for TNSPs to complete projects on time.

We are interested in stakeholder feedback on our proposed assessment framework and, in particular, on whether these criteria and/or any others, are appropriate.

QUESTION 1: RULE CHANGE REQUEST ASSESSMENT FRAMEWORK

- Do stakeholders agree with the proposed assessment framework?
- Are there any other considerations the Commission should take into account?

4.2 Revenue and Pricing Principles

In addition to the NEO, the AEMC must also take into account the revenue and pricing principles in the NEL[55] when considering whether to accept the rule change request.

The revenue and pricing principles require that a regulated network service provider (NSP) 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:

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

(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.[56]

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[57]
- Regard should be had to the economic costs and risks of the potential for under and over investment by a regulated network service provider[58]
- Regard should be had to the economic costs and risks of the potential for under and over utilisation of a transmission system[59]

4.3 Making a more preferable rule

Under s.91A of the NEL, the Commission may make a rule that is different (including materially different) to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule will or is likely to better contribute to the achievement of the NEO.

4.4 Making a differential rule

Under the Northern Territory legislation adopting the NEL, the Commission may make a differential rule if, having regard to any relevant MCE statement of policy principles, a different rule will, or is likely to, better contribute to the achievement of the NEO than a uniform rule. A differential rule is a rule that:

- varies in its term as between:
  - the national electricity system, and
  - one or more, or all, of the local electricity systems, or
- does not have effect with respect to one or more of those systems

but is not a jurisdictional derogation, participant derogation or rule that has effect with respect to an adoptive jurisdiction for the purpose of s. 91(8) of the NEL.

56 Clause 7A(3) of the NEL.
57 Clause 7A(5) of the NEL.
58 Clause 7A(6) of the NEL.
59 Clause 7A(7) of the NEL.

As the proposed rule related to parts of the NER that currently do not apply in the Northern Territory, the Commission has not assessed the proposed rule against additional elements required by the Northern Territory legislation.[60]

60 From 1 July 2016, the NER, as amended from time to time, apply in the NT, subject to derogations set out in regulations made under the NT legislation adopting the NEL. Under those regulations, only certain parts of the NER have been adopted in the NT. (See the AEMC website for the NER that applies in the NT.) National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

5 ISSUES FOR CONSULTATION

As discussed in Chapter 2, the economic regulatory framework set out in Chapter 6A of the NER is designed to (among other things) provide TNSPs with the opportunity to recover returns commensurate with the regulatory and commercial risks involved in providing prescribed transmission services.[61]

Importantly, in setting rates of return, the AER does not consider the details of individual businesses or projects. Rather, it considers the market cost of capital (or WACC) for an investment with a similar degree of risk as that which applies to a service provider in respect of the provision of regulated services.[62]

In other words, the economic regulatory framework is designed to regulate the benchmark efficient entity as distinct from individual businesses and projects. For this reason, the Commission is proposing to consider the issue of financeability of ISP projects with reference to the AER's benchmark efficient entity.

In this context, this chapter explores a number of key issues raised by the rule change requests, for consideration by stakeholders. Specifically, the Commission is seeking feedback from stakeholders on a number of matters related to the following questions:

- Does the current regulatory framework allow for efficient cost recovery of a benchmark efficient firm?
- What are the potential implications of creating a second RAB for ISP assets?
- How are consumers likely to be impacted if the changes proposed by TransGrid and ElectraNet in their rule change requests are made?
- How could any financeability issues be addressed if the changes proposed by TransGrid and ElectraNet are not made?
- Should there be transitional provisions until the next regulatory reset for TransGrid and ElectraNet?

Stakeholders are encouraged to comment on these issues as well as any other aspect of the rule change request or this paper, including the proposed assessment framework. Overall, the Commission is interested in stakeholder views on whether the proponents' proposals to remove RAB indexation and recovery of depreciation when incurred, would advance the NEO.

5.1 Does the regulatory framework create a barrier to the financeability of the benchmark efficient firm?

The economic regulatory framework is designed to ensure recovery of efficient costs. The proponents have argued that due to the scale, timing and assets lives of their actionable ISP investments, they are unlikely to be able to finance these investments at the cost of debt assumed by the regulatory model.

61 NEL, sections 2B and 7A(5) and 18I(5), NER s.6A.1.1, chapter 10.

62 *AER, Rate of return instrument, Explanatory Statement, December 2018, p.33.*

The concept of benchmark efficient entity lies at the heart of the incentive regime, compelling natural monopolies to provide competitive market outcomes for the benefit of their customers. The Commission is interested in stakeholder feedback on whether ISP investments would be unable to obtain financing under the AER's efficient firm rate of return assumptions.

The benchmark efficient firm

In the NEM, the economic regulation of energy network assets is based on a hypothetical benchmark efficient firm. The purpose of using an efficient benchmark is to replicate competitive market outcomes to incentivise network businesses to seek the most efficient financing possible. In theory, the efficient benchmark firm used by the AER to set the allowed revenue for TNSPs should result in efficient cost recovery. During a regulatory control period, there are years when a network may over- or under-recover, but over the life of the assets, the regulatory framework will ensure efficient cost recovery.

In its rule change request, TransGrid states that the rule change request is consistent with the revenue and pricing principles in the NEL because it provides:[63]

> ... a benchmark efficient entity a reasonable opportunity to recover at least the efficient costs it incurs in providing network services. A requirement for maintaining an expectation of efficient cost recovery is that the cash flows generated by tariffs are consistent with maintaining access to investment grade debt, within the constraint that the level of gearing needs to remain at a level that supports the returns needed to attract equity investors. The large capital expenditure requirements of ISP projects mean that at the benchmark efficient entity's level of gearing, which is necessary to attract investors, the cost of debt would materially exceed the cost of debt assumed by the AER in setting prices. This cost increase occurs because we would be unable to sustain an investment grade credit rating in this scenario.

The Commission is not aware of any evidence that economic regulation in Australia has led to under-investment in transmission networks. Therefore, the Commission needs to consider if TransGrid and ElectraNet would be unable to recover returns from their regulatory asset base, including ISP assets, that are commensurate with the regulatory and commercial risks involved in providing prescribed transmission services under the current economic regulatory framework. If this is the case, the Commission will consider if the proposed changes to the rules would be in the long term interests of consumers.

The Commission is seeking stakeholder feedback on whether there is evidence that the AER's hypothetical efficient benchmark firm would be unable to access to investment grade debt for New South Wales and South Australian ISP investments.

Financeability in the construction phase

The Commission notes that in principle, the existing revenue model (the Post Tax Revenue Model or PTRM) allows efficient costs to be recovered over the life of an asset. However,

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

there may be short-term cash flow variability or a mismatch in the timing of investment and revenue recovery. This is not a new issue and regulated networks have been able to manage this in the past. Even for projects in competitive sectors of the economy, revenue is normally generated only after benefits start being delivered.[64]

TransGrid observes that:[65]

> Currently, the AER requires depreciation of capital expenditure (the return of capital) to be recovered by TNSPs once the relevant assets are commissioned ('as-commissioned' depreciation). This requirement creates a delay to the recovery of revenue from the time the investment is made until the time the asset is finally commissioned and in service. For an investment like PEC, this means that many hundreds of millions of dollars is invested for several years before any revenue for depreciation is received.

A noted by TransGrid, the requirement for depreciation to be deferred arises through the roll forward model and the post tax revenue model. As explained in chapter 2, these are made by the AER under Chapter 6A of the NER and can be amended by the AER. The proponents propose that the derogation should direct the AER to apply a specific approach to the separate RAB for ISP projects and fix these principles for the life of the assets.

The Commission is interested in feedback from stakeholders on whether there is (or may be) a financeability issue during the construction phase of ISP assets. If so, the Commission is also interested in understanding whether there are tools and means available to network businesses - either within or outside the existing regulatory framework - to support the financeability of their asset base when delivering ISP projects. For example, the Commission is interested in understanding the scope of support from equity investors during the construction phase of a project.

The Commission is also interested in understanding whether the AER has the ability to address any issue identified in relation to the financeability of ISP projects under the existing regulatory framework, as well as the impact of any possible solutions on consumers. The Commission notes that the AER considered similar issues when determining their current rate of return instrument.[66]

QUESTION 2: CHANGING THE ECONOMIC REGULATORY FRAMEWORK

- Does the current economic regulatory framework allow transmission networks to recover their efficient costs when ISP capex is included?
- If you consider ISP projects to be materially different from other transmission network capex, how do you think the proposed changes would address this:
  - the change to a nominal rate of return

64 A building, for example, can't be leased until it is complete.
65 TransGrid, rule change request, p. 6.
66 AER *Rate of return instrument, Explanatory Statement*, December 2018, section 12.3.

- the change from allowing depreciation as commissioned to depreciation as incurred?
- Is the proponent's proposal in the long term interests of consumers with respect to the price of the supply of electricity ?
- How could short-term cash flow variability be addressed under the current regulatory economic framework?
- How else could financeability issues be addressed in the regulatory framework?

5.2 What are the implications of creating a second RAB for ISP assets?

The RAB is the foundation of the economic regulatory framework. The AER, in effect, applies a real rate of return (i.e. one that does not include inflation) to an inflation indexed RAB. To achieve this, the AER combines a nominal rate of return with a negative revenue adjustment. Because compensation for inflation is provided through both the RAB growth and a nominal rate of return, the negative revenue adjustment is needed to prevent double compensation for inflation. The AER makes this revenue adjustment through the depreciation component, effectively delivering a real rate of return. This ensures financial capital maintenance for investors and also spreads out the costs to consumers more evenly over time than a nominal rate of return model.

The changes proposed by TransGrid and ElectraNet would have the effect of creating a separate RAB for each proponent's share of ISP projects. This new RAB would not be inflation indexed. Instead, this new RAB would be subject to a higher, inflation inclusive, nominal rate of return. The effect of this change would be to increase TransGrid and Electranet's revenue early in an asset's life, and to reduce revenue later in the asset's life, as the rate of return and rate of depreciation are applied to a smaller asset value.

The second limb of the changes proposed by TransGrid and Electranet would allow for depreciation 'as incurred'. This means that works in progress would earn depreciation revenue even if those assets are not in service. This would bring revenues forward compared to the current arrangements, where depreciation is only allowed once assets are commissioned.

In its rule change request, TransGrid claims that it has identified issues with the current regulatory framework relating to the financeability of large-scale projects with long asset lives that these issues are related to deferred revenues:[67]

> In the course of our assessment of PEC (as part of the Contingent Project Application (CPA) development), we have identified 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. This issue has not been apparent before and has emerged as a direct result of the unprecedented capital investment required in order to deliver the

67 TransGrid, rule change request, p.3.

> ISP projects mentioned above.
>
> The financeability issue is due to the regulatory framework deferring revenue recovery for capital investment costs until later in the asset's life.

Changing the economic regulatory framework by allowing two differently administered RABs for the same transmission business would represent a significant change from current regulatory arrangements. This could potentially have unintended consequences for other aspects of the economic regulatory framework.

The economic regulatory framework for setting the MAR was designed to be applicable to the full regulatory asset base providing prescribed transmission services, not to individual assets or projects in isolation. In its rule change proposal, ElectraNet notes that while its analysis is on the PEC investment:[68]

> ...the current revenue setting process cannot support the benchmark credit rating for a standalone project, new transmission projects are generally added to an existing asset base rather than being financed on a standalone basis.

The Commission notes TransGrid's statement that the rule change *"is required to enable us to establish finance for the ISP projects in time to ensure they are delivered consistent with maximising benefits to customers"*[69] and notes that *"ElectraNet supports TransGrid's view that the Rule change is urgent because a timely investment decision regarding Project EnergyConnect is required".*[70]

In its rule change request, ElectraNet also states that:[71]

> The AER will need to develop a new RFM and PTRM to apply to actionable ISP projects, but these changes are not complex and can be introduced easily.

The Commission is seeking feedback on whether and how the creation of a second differently administered RAB could impact other elements of the economic regulatory framework, including possible implications on capital markets. For example, would the nominal rate of return RAB model (proposed ISP RAB) be more attractive for providers of debt financing than the real rate of return RAB model (existing RAB) and what are the trade-offs for consumers and equity investors?

In addition, the Commission is interested in understanding whether there are any practical implications for the AER in administering multiple regulatory assets bases. For example, the creation of a second RAB using a nominal rate of return model may require consideration of the relative riskiness of each RAB investment. This would involve considering if the rate of return should be different for the nominal rate of return model since some construction risk would be eliminated and inflation risk would be transferred to consumers.

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68 ElectraNet, rule change request, p. 13.
69 TransGrid, rule change request, covering letter.
70 *ElectraNet, rule change request, p. 5 .*
71 ElectraNet, rule change request, p.20.

ISP investments are large, lumpy investments and the proposed changes may further increase the lumpiness of returns. The Commission is therefore also interested in understanding whether there may be related implications for the AER's rate of return instrument, including debt profiling arrangements, that may feed back in to the proposed rule change.

The Commission notes that current arrangements were considered and developed over an extended period[72] and considers that the bar for creating a second RAB through a much more compressed process should therefore be high.

QUESTION 3: THE REGULATORY ASSET BASE

- Is the impact of ISP projects materially different enough from other transmission network capex projects to justify a separate treatment?
- If you consider ISP projects to be materially different from other transmission network capex, how do you think the proposed changes would address this:
  - the change to a nominal rate of return
  - the change from allowing depreciation as commissioned to depreciation as incurred?
- How does your view lead to a better outcome under the NEO or the revenue and pricing principles?
- How can the twin RAB model be implemented in practice and what are the effects on the other elements of the regulatory framework?
- Are there potential unintended consequences of the twin RAB model the Commission should be aware of?
- How could unintended consequences that only emerge in the future be addressed?
- If two RABs are allowed, which ISP investments should qualify for inclusion in the second RAB?

5.3 What are the consumer impacts of the proposed rules?

The proponents argue that their proposed changes to the rules would allow consumers to obtain significant benefits in the long term while still ensuring the NPV neutrality of revenue. The Commission is seeking feedback from stakeholders on the impact of the proposed changes on consumers, including the inter-generational wealth transfers the changes may create. It is also interested in understanding from consumers directly whether they would be willing to pay more now for network assets for which the benefits are largely likely to occur in the future.

72 See, for example, the ACCC Draft Statement of Principles for the Regulation of Transmission Revenues, 27 May 1999, pp.57-70; ACCC Post-tax revenue handbook, October 2001, pp.10-11; The Allen Consulting Group, Report to the ACCC, Methodology for updating the regulatory value of electricity transmission assets, Final Report, August 2003, pp.42-43; ACCC Decision, Statement of principles for the regulation of electricity transmission revenues, 8 December 2004, p.40 and the associated background paper, chapter 4 and appendix A.

In the rule change requests, the proponents argue that the current economic regulatory framework makes revenue recovery for ISP investments back-ended. In response, they have proposed changes which would bring revenues forward, allowing them to obtain financing consistent with the efficient benchmark financing costs for their ISP projects. The proponents claim that this would be a straightforward change to the regulatory framework that would not impact the overall costs paid by consumers for the delivery of ISP transmission investments.

For example, in its rule change request, TransGrid states that:[73]

> We have been working closely with the Australian Energy Regulator (AER) and other stakeholders through the course of this year to find an appropriate solution that facilitates the timely and efficient delivery of ISP projects and reduces the barrier to attracting capital in a manner that does not increase the costs to consumers. This dialogue has concluded that the financeability issue is unable to be resolved within the existing regulatory framework and a rule change is the most efficient solution.

The proponents argue that given the proposed changes are effectively NPV-neutral, they will not create any additional costs to consumers over the long-term. For example, TransGrid's consultant Incenta comments that:[74]

> Importantly, 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.

Further, the proponents argue 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 their respective rule change requests, both TransGrid and ElectraNet provide analysis around the impact of their proposed changes to the NER on consumers. As a result of making the proposed changes, TransGrid[75] estimates that the consumer impact for the remainder of its current regulatory period (expiring in 2023) will be $3 per household per year; ElectraNet[76] estimates the consumer impact to be $4 per household per year. This expected consumer impact will be higher in the future as more ISP projects get captured by the participant derogation.

Similarly, TransGrid's economic consultant, FTI, notes that consumers will get the benefits of substantial savings from lower wholesale electricity prices after the commissioning of PEC:[77]

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73 Paul Italiano, Letter to AEMC accompanying TransGrid's rule change request, 30 September 2020, p.1.

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

75 TransGrid, rule change request, p.26

76 ElectraNet, rule change request, p. 20.

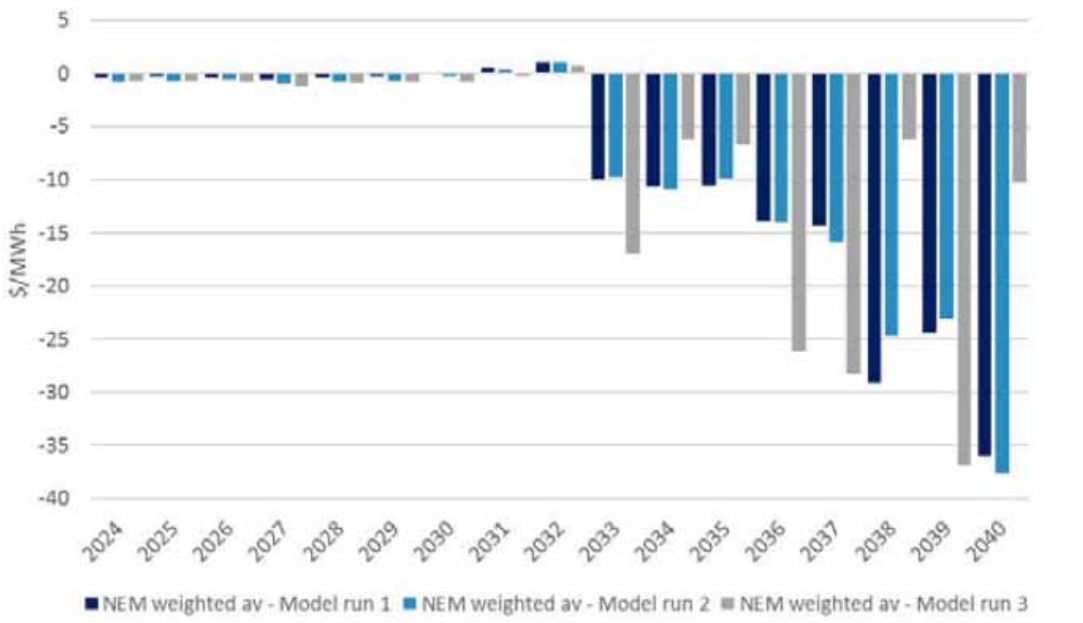
77 FTI, Assessing the benefits of interconnectors, October 2020. p.11.

> 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 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). The Commission notes that it is important to evaluate the timing of cost recovery and consumer benefits in light of the proponents' proposal to bring forward revenue to de-risk the financing of the PEC. Further, ElectraNet noted that:[78]

> The proposed Rule change has the effect of rebalancing the profile of revenue, increasing it in the early years of an actionable ISP project and reducing it in later years. The total amount of revenue to be recovered would be unchanged in net present value terms. By addressing the financeability issues, the proposed Rule change will promote efficient investment in the provision of network services, in accordance with the National Electricity Objective (NEO).

Figure 5.1: Wholesale electricity price reductions (FTI modelling)



Source: FTI, Assessing the benefits of interconnectors, October 2020. p.12.
Note: Figure Note

The analysis above highlights a key implication of the rule change requests - that is, that making the changes proposed by TransGrid and ElectraNet would result in current customers paying more for the PEC investment now, despite consumers in the future obtaining most of

78 ElectraNet, rule change request, p.4.

the benefits. The Commission notes that this outcome differs from most commercial assets, where revenues tend to be earned at the time those assets start to deliver benefits. For example, with transport assets such as toll roads, users pay for the service when the asset is used, not when it is being built. Further, revenues often increase as usage climbs over time.

The Commission is interested in understanding stakeholder views on the long term consumer impact of the solutions proposed by TransGrid and ElectraNet for facilitating on time ISP project delivery. The Commission is particularly interested in stakeholder views on: the potential of the rule change requests to create an inter-generational wealth transfer, where current consumers would pay more for assets that deliver benefits to future consumers, and the willingness of consumers to accept the absolute price impacts of the proposed changes, in particular during the earlier stages of ISP projects. The Commission is undertaking modelling on the costs to consumers of the proposals and will consider this in its assessment.

QUESTION 4: CONSIDERING CONSUMER IMPACTS

- Considering the expected consumer benefits from commissioning the ISP assets, do you agree that not making a change will result in a loss of those benefits?
- Does TransGrid's proposed changes result in intergenerational wealth transfers?
- Are consumers willing to pay more now for future benefits that are likely to occur in the future?
- Are consumers willing to pay for assets before being able to obtain any benefits?

5.4 How can financeability issues be addressed if the proposed changes are not made?

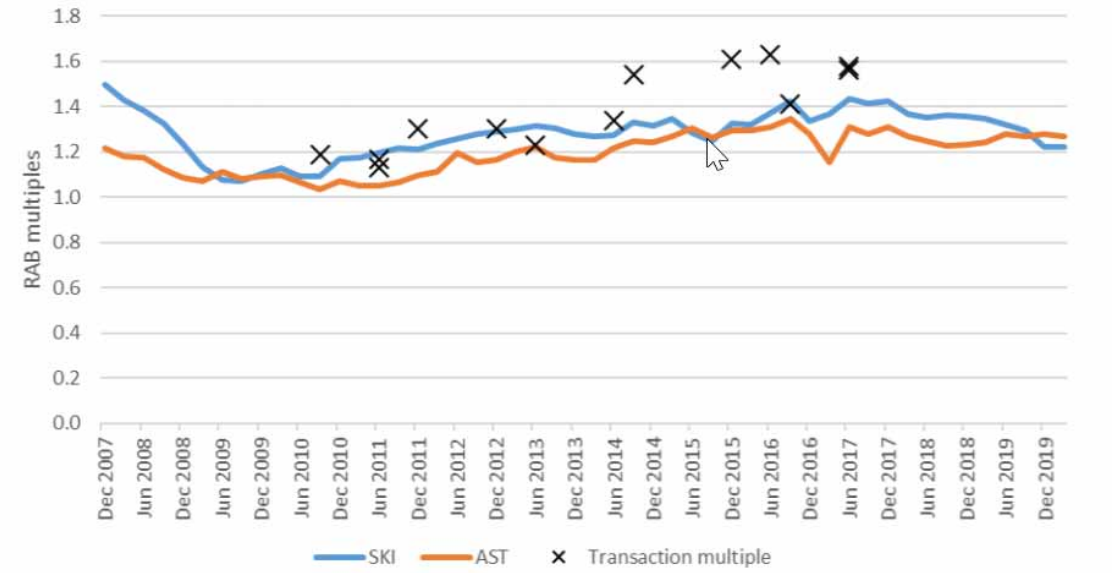
Section 5.1 explained that short term financeability issues can, in principle, be addressed under the current regulatory framework. The Commission is interested in stakeholder views on why TNSPs may be unwilling to invest in ISP assets, in particular, considering that the current regulatory framework allows for efficient cost recovery and recent transactions indicate that investors value network businesses significantly higher than their regulatory asset value.

There could be instances where transmission networks do encounter difficulties obtaining financing in line with their own financial and capital structure policies. The Commission is seeking feedback on what alternatives could be considered to ensure that essential ISP investments go ahead as planned.

The Commission undertook some initial research on the market values of energy networks. Figure 5.1 shows RAB multiples for Australian energy networks:

- Transaction multiples are RAB multiples arising from the transaction of a discrete component of an ownership group including regulated energy networks.
- Trading multiples are RAB multiples generated using market value data on the enterprise value of publicly listed entities.

Figure 5.2: RAB multiples



Source: AER, Electricity network performance report 2020, September 2020, p. 50.
Note: Morgan Stanley Research, AER analysis.

Figure 5.2 indicates that RAB multiples for energy networks have been consistently over one. RAB multiples can be calculated by dividing the enterprise value by the RAB value. This indicates that the market or the purchase of an asset, values expected cash flows (the enterprise value) higher than the RAB and is therefore willing to pay a premium for the assets. For example, a transaction RAB multiple of 1.5 would mean that the purchase bought an asset for 1.5 times its RAB value.

The Commission is interested to find out how the relatively high RAB multiples for Australian energy networks can be reconciled with TransGrid's and ElectraNet's claims that ISP assets are not financeable. The Commission is particularly interested in understanding why a transmission business would potentially be unwilling to invest an asset that, on its face, could be sold for more than it costs to build.

The Commission is also interested in understanding whether other options might be available to ensure the timely delivery of ISP projects.

QUESTION 5: CAN FINANCEABILTY BE ADDRESSED UNDER THE CURRENT ECONOMIC REGULATORY FRAMEWORK?

- 'Given the RAB multiple paid by investors in Australian energy networks, what are the impediments to investors when the investment involves an ISP project?

- If construction risk is one of the factors low credit ratings for ISP projects, could equity provide sufficient support to bring those projects through the construction phase?
- What options, other than changes to the economic regulatory framework, could be considered to ensure timely investment and delivery of ISP projects?

5.5 Should there be transitional provisions until the next regulatory reset?

The proponents requested that their proposed changes to the rules be applied to their current regulatory control periods since the investment in actionable ISP assets will commence before the next regulatory reset. The Commission is seeking feedback on whether stakeholders believe that this is necessary and what the potential alternative options would be.

For example, TransGrid requests that: [79]

> The rule change request provides for transitional arrangements to provide that it would apply to VNI minor and Project EnergyConnect (PEC), which are likely to have already commenced the contingent project process at the time the AEMC makes its decision on the rule change, as well as TransGrid's share of all ISP projects subsequently approved through the regulatory process.

The Commission is interested in understanding how the proposed transitional arrangements will be implemented in practice and if they are justified in terms of cost benefit analysis given the relatively short time they are likely to be in place.

QUESTION 6: TRANSITIONAL ISSUES

- If the proponents' rules are made, should there be transitional provisions to apply them to VNI minor and PEC?

79 TransGrid, rule change request, p. 19.

6 LODGING A SUBMISSION

Written submissions on the rule change request must be lodged with Commission by 3 December 2020 online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code ERC0320.

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Submissions should indicate whether they are responding to the ElectraNet rule change request, the TransGrid rule change request, or both.

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.[80] The Commission publishes all submissions on its website, subject to a claim of confidentiality.

All enquiries on this project should be addressed to Alex Oeser at alex.oeser@aemc.gov.au

80 This guideline is available on the Commission's website www.aemc.gov.au.

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
Proponents	TransGrid and ElectraNet
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