

Financeability of ISP Projects

Response to AEMC Consultation Paper: Participant
derogation – financeability of ISP projects

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Contents

Contents	2
Key messages	3
1 Overview	3
2 Background	4
3 AEMC assessment framework	5
4 Issues for consultation	7



Key messages

- » It is critical that the regulatory regime as a package provides for financeable Integrated System Plan (ISP) developments.
- » The issues highlighted by the TransGrid and ElectraNet derogation proposals are stark examples - given the size of the investments - of broader trend of emerging issues of financeability for new investment across mature electricity and gas networks.
- » A set of pragmatic solutions such as those proposed will need to be available to be tailored to investment types and levels - a failure to deliver the actionable ISP projects has the potential to cause long-term detriment to consumers.

1 Overview

Energy Networks Australia (ENA) appreciates the opportunity to provide a response to the Australian Energy Market Commission's (AEMC or the Commission) Consultation Paper¹ on ElectraNet and TransGrid's rule change proposals that aim to ensure the financeability of Integrated System Plan projects.²

Energy Networks Australia is the national industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

The Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP) has determined a number of large-scale actionable ISP projects that are critical to address cost, security and reliability issues in the National Electricity Market (NEM).

These projects have been independently assessed as providing a net benefit to consumers, and the task is now ensuring that the regulatory framework provides for *financeable* ISP projects.

The rule change proponents have proposed a targeted and proportionate approach that adjusts the revenue profile for only select projects, making them financeable and ensuring that consumers are able to therefore benefit from the implementation of the ISP.

¹ Australia Energy Market Commission, Participant derogation - financeability of ISP projects, Consultation paper, 5 November 2020.

² Participant derogation - financeability of ISP projects (TransGrid) - Project Reference ERC0320.
Participant derogation - financeability of ISP projects (ElectraNet) - Project Reference ERC0322.

2 Background

2.1 The energy transformation

Australia's energy system is undergoing a significant transition, moving away from large coal and gas centralised generation to smaller scale dispersed generation that is increasingly renewable generation.

AEMO's ISP is a whole-of-system plan that provides an optimal roadmap for the development of the NEM as electricity generation transforms to a low emissions future. As summarised by AEMO:

*The ISP identifies investment choices and **recommends essential actions to optimise consumer benefits** as Australia experiences what is acknowledged to be the world's fastest energy transition.³*

Provided that the transmission investments are timely and kept at an efficient level, AEMO estimates that the proposed ISP investments will deliver \$11 billion in **net** benefits to the NEM.⁴ Under credible 'fast change' or 'step change' scenarios, these benefits may be higher.

The 2020 ISP sets out four major integrated transmission investments required across the period 2021-26 to support an efficient, stable and reliable national transmission architecture. A significant common feature of these projects is that they will:

- » support private capital infrastructure expenditure during a period of extremely low expected capital expenditure across Australia,
- » support and generate significant employment outcomes through the design and construction phases, and
- » deliver sustainably lower electricity wholesale prices through enhancing competition and market access for new renewable generators, further supporting employment and economic growth.

These investments have been identified as high priority and energy agencies and Ministers have put in place a series of reforms to make the ISP 'actionable'.

Each proposed investment will be subject to streamlined regulatory arrangements aimed at promoting timely investment outcomes, and ensuring positive net market benefit from their commissioning and operation.

Clearly identified projects, and revised regulatory assessment processes, provide a required foundation for private investment decisions for individual projects, but do not automatically mean that the projects proceed.

³ Australian Energy Market Operator, 2020 Integrated System Plan, July 2020, emphasis added.

⁴ Australian Energy Market Operator, 2020 Integrated System Plan, July 2020.

2.2 Rule change proposals

ElectraNet and TransGrid are partnering to deliver an energy interconnector between South Australia and New South Wales, with an added connection to Victoria. The resulting Project Energy Connect has been identified by AEMO as an ‘actionable ISP project’ that will deliver net market benefits and support Australia’s energy transition. Actionable ISP projects have been deemed by AEMO as critical to address cost, security and reliability issues.

These actionable ISP projects are significant in scale and scope, and the scale of the upcoming transmission project rollout is unprecedented in Australia. Features of the existing regulatory framework, however, have considerable implications for the financeability of these large-scale projects with long asset lives, as revealed through the assessment process for Project Energy Connect.

This has led ElectraNet and TransGrid to submit rule change proposals to the Commission, in the form of participant derogations, that aim to ensure the financeability of their ISP projects. The rule change, if approved, will more closely align revenue recovery with incurred costs such that the ISP projects are financeable and therefore can be delivered as set out in AEMO’s ISP.

3 AEMC assessment framework

3.1 Assessment criteria

ENA agrees that the Commission should assess whether the rule change request promotes 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.

ENA however has some concerns with the criteria the AEMC outlines to help assess whether the rule is likely to promote the National Electricity Objective (NEO).

In ENA’s view it would be appropriate to assess all aspects of the rule change proposal with direct reference in any assessment criteria to each aspect of the NEO and the long-term interests of consumers. In some cases, the linkage between the overarching NEO and elements of the AEMC criteria are not clear.

As an example, the criteria ‘Impacts on economic regulatory framework’ is not as clearly relevant to achieving the NEO as other criteria and should not be given significant weight in the AEMC’s decision making process alongside primary considerations such as the safe, reliable and efficient operation of the national electricity system.

In this regard, the specific economic regulatory framework to be applied for achieving the NEO is a matter for consideration and potential adjustment. Consideration of follow on impacts of any determined adjustments are a matter for close consideration

but should not ultimately have the effect of outweighing other NEO factors. Similarly, all other aspects of the rule change that the AEMC considers should be assessed with direct reference to the NEO.

3.2 The AEMC will need to outline a clear counterfactual

In order to clearly assess the merits of the proposed rule change, the AEMC will require a clear counterfactual scenario or a set of clear counterfactual scenarios to assess the rule change against. Without these counterfactuals, it is not clear on what basis the AEMC could form a full assessment of whether the rule change request is in the long-term interests of consumers and meets the NEO compared, for example, to the circumstances in which a rule is not made.

It would be ideal if there were a single counterfactual scenario for the AEMC to assess the rule change against, however, there is uncertainty as to what outcomes will transpire and how these outcomes may impact the long-term interests of consumers and to what extent they achieve the NEO. In this instance ENA believes that a number of scenarios are plausible and should be considered.

ENA sees the following scenarios as potential outcomes if the AEMC decides not to make a rule:

- » **Project proceeds but with direct government funding or support** - The project proceeds with support of enhanced taxpayer funding to ensure financeability.
 - This scenario would potentially result in the credit metrics of ElectraNet and TransGrid being maintained and the efficient financing costs incurred by businesses. In this case, the project benefits are potentially realised, without any of the underlying regulatory barriers to financeability of large ISP projects being addressed.
- » **Failure to proceed with actionable ISP project** - The proponents of Project Energy Connect elect not to proceed.
 - It is noted that Project Energy Connect not proceeding, based on existing modelling, would potentially be an adverse outcome for consumers as consumers would not receive the expected benefits of between \$58.40 - \$63.90 per annum in New South Wales⁵, and \$100 per annum in South Australia⁶.
 - This scenario is unequivocally not in the long-term interests of consumers and has negative impacts on all aspects of the NEO that the AEMC has identified

⁵ TransGrid, Rule Change Proposal - Making ISP Projects Financeable - Participant Derogation, September 2020, page 26.

⁶ ElectraNet, Rule Change Proposal, Making ISP Projects Financeable - Participant Derogation, October 2020, page 20.

as relevant to this rule change. Efficient investment would appear to be foregone.

- In addition to foregoing price benefits for consumers, Project Energy Connect is an actionable project in the 2020 ISP, meaning AEMO believes that it should ‘commence immediately in order to reduce costs, enhance system resilience and optionality’⁷. This clearly suggests Project Energy Connect not proceeding would also degrade system resilience and optionality.
- This scenario could set a precedent for future ISP projects where they may not proceed on the basis that they are unfinanceable, further cascading net market losses.

The AEMC may form the view that a failure to proceed with the derogation may not impact the delivery of project benefits due to the project proceeding. If this is the relevant counterfactual which the AEMC chooses to assess the derogation proposal against, it would need to specify the evidential basis for its assessment and the steps it had taken to affirmatively satisfy itself of this assessment given the information set out in the derogation proposals.

ENA’s assessment of these potential counterfactual scenarios is that each would likely lead to an outcome that does not achieve the NEO when compared to a scenario where the proponents’ rule change is made, enabling conditions for efficient financing of the affected projects.

4 Issues for consultation

4.1 Regulatory framework

4.1.1 Transmission projects

The existing regulatory framework for transmission includes the following two design features that create a mismatch between when costs are incurred by the transmission network service provider (TNSP), and when revenues are recovered by the TNSP:

- » Indexation of the regulatory asset base (RAB), and
- » Regulatory depreciation allowance calculated on as-commissioned basis.

These features have worked effectively for capital projects that are predominately incremental in nature, and which are therefore not as significant in size or cost. However, as mentioned previously, the scale of the upcoming transmission project rollout, as required by the ISP, is unprecedented in Australia, and material when compared to the value of TNSPs’ total RABs. For example, as noted in TransGrid’s rule change proposal, \$9-10 billion in greenfield capital investment is needed over the next

⁷ Australian Energy Market Operator, 2020 Integrated System Plan: Appendix 3. Network investments, July 2020, page 8, 9.

ten years to deliver TransGrid's share of the ISP projects, compared with a total RAB value of approximately \$6.4 billion.

A TNSP's RAB is an accumulation of the value of investments that it has made in its network, which have not yet been fully depreciated, and it includes assets of various economic lives and ages. The AER provides compensation for expected inflation by combining a nominal rate of return with an indexed RAB, however, to avoid double compensation for inflation, the AER makes a negative revenue adjustment to a TNSPs' depreciation allowance.

This in effect defers a TNSPs' revenue recovery for capital investment costs into the future, which will cause very significant cash flow issues for ISP projects that are large, discrete and non-recurrent in nature. As highlighted by the rule change proponents, it results in a revenue profile that is insufficient to support the financing requirements of a benchmark efficient entity.

Under normal regulatory settings the same issue, however, does not necessarily arise for a TNSPs' business as usual capital expenditure, as the diversity of investments in a RAB with respect to economic age and lives, means that the negative cash flow impact of RAB indexation on newer RAB assets can be offset by the positive impact of indexation on cash flows associated with older assets.

ElectraNet and TransGrid are proposing to remove indexation of the RAB **only** for their respective investment in ISP projects, thereby removing the need for the AER to make a negative revenue adjustment to a TNSPs' depreciation allowance (for ISP projects). This change simply amends the revenue recovery profile over the life of the ISP assets and has no impact on the total amount of revenue recovered by the TNSP in present value terms.

4.1.2 Financeability issues for capital investment under current regulatory settings

The rule change proponents have each identified significant financeability issues associated with the projects proposed to be subject to the derogation.

The issues set out by the proponents 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.

While the Commission is required to consider and assess proposed solutions to the rule change as lodged, in its considerations it should be aware of broader emerging trends and pressures that impact on the investment environment for energy network infrastructure.

This is especially relevant given some public commentary has suggested that it is possible for individual projects that would fail investment grade credit metrics on a stand-alone basis may nonetheless become financeable when assessed as part of a larger portfolio of a regulated firms' capital expenditure.

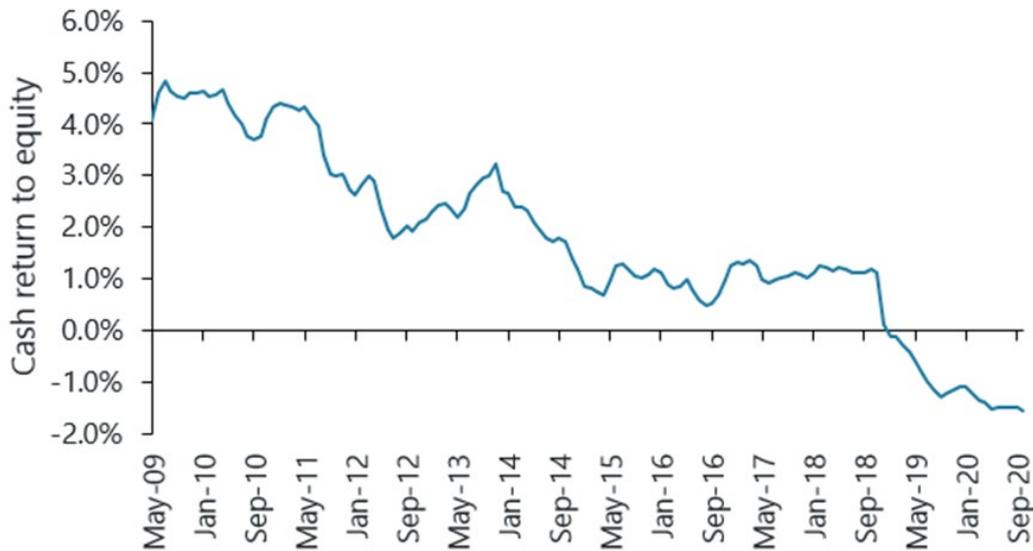
While each investment will have its individual characteristics, a range of financeability pressures are emerging on a sector-wide basis, such that it is not a safe conclusion to form that the aggregation of large program of smaller investment projects – as might occur in energy distribution networks, for example – will lead to an absence of issues.

These issues underlying emerging financeability pressures are:

- » **Reductions in the return on equity parameters in 2018 Rate of Return Instrument (2018 RoRI)**– the 2018 RoRI delivered the largest single fall in the equity risk premium of any guideline or determination to date impacting the network sector. Currently around 40 per cent of networks by value of regulatory asset base are yet to have the 2018 RoRI apply. As the 2018 RoRI enters into effect, financeability pressures around new investment can be expected to grow.
- » **Historically low risk-free rates, with current policy interventions further suppressing yields** – government bond yields are currently at historic lows. Under the approach adopted in the AER’s binding 2018 RoRI, a reduction in the 10-year government bond yield mechanically flows through, one-to-one, to a lower regulatory allowance. From November 2020, the Reserve Bank has further announced an unprecedented program of purchasing of \$100 billion of government bonds, designed to further lower yields across 5 and 10 year government bonds. This will further artificially suppress the key proxy variable used in future return on equity estimates.
- » **Existing regulatory inflation estimation approaches** – the issue arises from the interaction of current low inflation conditions and existing estimation approaches, together with the operation of current regulatory revenue models. The AER has recently consulted on revised estimation approach which would mitigate this particular impact. Even with this change, however, current regulatory revenue and indexation models will have the impact of back-ending recovery of network costs, passing these to future consumers.

The combined impact of these factors is resulting in regulatory allowances for mature electricity distribution networks which deliver negative profit after tax for the benchmark efficient firm in every year of the regulatory period. In addition, network decisions following the 2018 RoRI have embedded a negative cash return on equity (see **Figure 1** overleaf).

Figure 1 - AER Allowed Cash Return on Equity



Source: AER regulatory determinations; Frontier Economics calculations. Computed as prevailing 10-year government bond yield plus AER allowed equity risk premium (beta times MRP) minus 2.5 times AER's inflation estimate.

This is a new development arising in recent network determinations made under the conditions above, which so far has affected networks in New South Wales, Queensland, and South Australia. Current Victorian draft determinations also feature negative net profit after tax, and result in FFO/Debt benchmarks that falls below that required for investment grade credit ratings. ENA's understanding based on published credit rating methodologies and members interacting with credit agencies is that the FFO/Debt metric is a significant measure attributed substantial weight in business credit metric assessments and ratings.

These outcomes have led to the Sapere Research Group, commissioned by the AER in the context of the AER review of regulatory inflation, to observe⁸:

*Stakeholders have correctly identified that the current regulatory approach may result in negative cash returns to equity; negative cash returns to equity may occur with a low allowed nominal rate of return on equity and/or high leverage. If, in addition, outturn inflation is low relative to expected inflation, then the return on equity may in amount be insufficient to meet the obligation to pay interest...we note that the sustained fall in inflation expectations means that the parameter estimates determined recently by the AER imply a negative cashflow return on equity for a benchmark efficient entity. **We suggest that the AER consider, during its 2020 Inflation Review, whether a projected***

⁸ Sapere, Target return and inflation, Input to the AER Inflation Review 2020, June 2020, page. 30.

negative cash return on equity might indicate an underlying inconsistency in one or more inputs into its estimate of WACC and expected inflation.

The issues highlighted by TransGrid and ElectraNet represent particularly stark examples, given the size of the investments, of these broader emerging issues of financeability for new investment across mature electricity and gas networks.

The current derogation assessment process should be informed by consideration of these emerging challenges, to ensure the Commission’s decision recognises the underlying trends in place are not isolated to large one-off transmission projects under the ISP.

Network businesses do not suggest that these issues can be resolved through this current process, as they are inextricably linked to considerations under the Rate of Return Instrument, existing regulatory revenue models determined by the AER, and other components of building block determinations.

Due to the staggered nature of network determinations, the full financeability impacts of the AER’s 2018 rate of return instrument have not yet been felt. As the chart below identifies, by value of Regulatory Asset Base the regulatory returns of around 40 per cent of network assets continue to be set by the 2013 Guideline (See **Figure 2**).

This means further reductions in return on capital allowances are locked in as new determinations are made under the 2018 RoRI. This can be expected to heighten financeability pressures around new investment for some network businesses.

Figure 2 - Indicative lagged impact of Rate of Return Instrument - % of total network RAB covered by Guideline or Instrument (area)



Consistent with the rule change proposals, it is *not* suggested that a proportionate or targeted approach would be to lift the applicable rate of return on large transmission projects to universally meet financeability metrics.

Rather, a targeted and proportionate set of pragmatic approaches for different investment types and levels is likely to be needed, together with resolution of the fundamental underlying inconsistencies highlighted by the Sapere above, in the context of the 2022 Rate of Return Instrument and individual network determinations. In relation to large ISP projects, based on specific project circumstances, these may be a case for the future extension of similar rule to other interconnection projects to ensure delivery of planned ISP benefits.

4.2 Assessing financeability and investment evidence

The Consultation Paper seeks comment on the question of why TNSPs may be unwilling to invest in ISP assets against the background of the existing cost recovery framework and recent transactions valuing network businesses at higher than their regulatory asset value.

Section 4.1.1 of this response discusses the specific financing challenges facing large transmission projects, effectively representing at completion a major proportion of a TNSP's asset base.

4.2.1 Assessing RAB multiple evidence

The Consultation Paper replicates information in the 2020 AER *Network Performance Report* which sets out RAB multiples from transactions and implied in two listed market securities for the period December 2007 – December 2019.

The Consultation Paper queries how the 'relatively high' RAB multiples during this period can be reconciled with the analysis from the derogation proponents that the investments are not financeable. Further, the Consultation Paper indicates that potential investment capital should be forthcoming given that 'on its face' the asset could be sold for more than it costs to build.

While ENA acknowledges stakeholder interest in RAB multiple data, as acknowledged by the AER in previous rate of return guideline review processes, caution must be applied when interpreting this data.

There are significant problems with the capacity of RAB transactions and implied multiples from securities to provide reliable insights into the questions of forward-looking financeability that are the subject of the proposed derogations. These conceptual limitations are well-established by academic literature, and acknowledged by the AER.⁹

These include:

- **RAB multiple data are not a reliable measure of the sufficiency of expected returns** – It is well established in economic literature that variations from a multiple of 1 can occur due to a variety of factors not relating to the sufficiency

⁹ AER RAB [Multiples Explanatory Note](#), AER Network Performance Report 2020.

of expected regulatory returns.¹⁰ These includes factors such as transactions reflecting valuation of unregulated operations of the firm, in the case of recent transaction multiples these have been material issues.

- **RAB multiples above 1.0 are not strong evidence that allowed returns are sufficient to attract efficient investment** – There are a range of strict conditions which simultaneously would need to hold for RAB multiples to indicate allowed returns are sufficient to promote efficient levels. In the AER materials replicated by the Consultation Paper, there is no consideration of whether these conditions apply in the present circumstances.¹¹

Significant weight appears to be have placed by some stakeholders on individual transaction multiples, and implications for the general investment environment for networks. As an example, recent TransGrid acquisition multiples have been cited in support for the proposition that access to capital for major ISP projects is likely to be secured. Previous AER decisions have specifically cautioned against this approach.

It is not correct to attribute an entire purchase multiple to a businesses' RAB. Neither is it correct to suggest all regulated businesses are valued as though they have significant and commercially successful contestable businesses. ENA understands that reasonable approximate allocations between the regulated and contestable businesses in the case of TransGrid would show an actual RAB multiple substantially less than 1.6.

The outcomes of this approach appear consistent with the detailed discounted cash flow analysis provided by TransGrid in support of the derogation, which shows major project capital expenditure cannot achieve the assumed cost of capital.

The AER further set out the limitations of RAB multiples in an Explanatory Memorandum, and in recognition of these limitations, prior to 2018, the AER placed no weight on RAB multiples in reaching decisions on expected rates of return.¹²

International regulatory approaches that assess financeability issues typically rely on the performance of the benchmark efficient firm against a set of standard credit metrics, such as those metrics outlined in the rule proponent's proposal.

This assessment is undertaken on a forward-looking prospective basis against, typically, the target credit rating assumed in relevant rate of return determinations. This ensures that a proposed program of capital expenditure, and the entire regulatory package, is financeable.

¹⁰ Biggar D, Understanding the role of RAB multiples in regulatory processes, ACCC Regulatory Economic Unit.

¹¹ Biggar D, Understanding the role of RAB multiples in regulatory processes, ACCC Regulatory Economic Unit.

¹² AER 2018 Rate of Return Instrument - Explanatory Statement, p.388; AER 2013 Rate of Return Guideline - Explanatory Statement, p.48.

ENA is not aware of any regulatory or rule-making body that forms assessments on financeability issues or the sufficiency of expected returns with sole reference to RAB transaction multiple information.