

2/07/2020

Australian Energy Market Commission

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Submission to consultation on the electricity economic regulatory framework review 2020 approach paper

We welcome the opportunity to respond to your electricity economic regulatory framework (**ENERF**) review approach paper 2020.

We are the operator and manager of the high voltage transmission network connecting electricity generators, distributors and major end users in New South Wales and the Australian Capital Territory. Our network is also interconnected to Queensland and Victoria, and is instrumental to an electricity system that allows for interstate energy trading.

We understand that this review will identify a priority list of issues relevant to the ongoing transformation of the electricity sector that require attention or reform, and which are not being addressed through existing National Electricity Market (**NEM**) reform processes. In its approach paper, you identify the need to consider whether the existing economic regulatory framework is fit-for-purpose for large transmission projects identified in the Australian Energy Market Operator's (**AEMO**) Integrated System Plan (**ISP**). You also identify risk allocation between network businesses and consumers and the need for enhanced consumer engagement as issues that may require attention.

We support this review and your identification as a priority issue for reform the suitability of the contingent project framework in the National Electricity Rules (**NER**) for large transmission projects in the ISP. We also support reform which promotes efficient risk allocation and enhanced consumer engagement.

The economic regulatory framework for transmission network service providers (**TNSP**) has worked effectively for capital projects which are predominantly incremental in nature, are of a relatively small size and complexity, and do not involve multiple government jurisdictions. However, our first-hand experience is that when this framework is applied to much larger transmission projects, such as those in the ISP, the existing framework is resulting in extensive time periods for regulatory approval and concerns by investors that the projects are not investable due to an unclear and uncertain risk profile. The existing regulatory framework is therefore not enabling the most efficient and timely outcome for consumers for the large and complex transmission projects identified in the ISP.

There is no single aspect of the regulatory framework that can be identified as the root cause of the issue. However, it is the combined effect of multiple aspects of the framework which create a suboptimal outcome for consumers, when specifically applied to the major ISP projects.

In summary, the key issues with the current framework in the NER for large and complex projects include:

1. **Number of unknowns when estimating the costs for large and complex projects:** There is difficulty in estimating capital costs upfront for large transmission investments given the extent and number of unknowns, for example geotechnical conditions and aboriginal heritage.
2. **No certainty for actual cost recovery:** The risk of unexpected costs during construction being incurred on a large project is held by investors with no certainty that the AER will allow these costs to be rolled into the regulatory asset base (**RAB**) and recovered by a TNSP. A TNSP also has no rights to appeal the merits of the AER's decision.

3. **Length of time for approval:** The number of regulatory bodies and stakeholders involved in multiple stages of assessment is creating long time periods for approval and adding unnecessary costs to projects. The long approval process is also creating a misalignment between when the project construction would commence (based on the existing regulatory approval processes and stages) and when the construction is required to commence in order to meet Governments' expectation of completion dates.
4. **Time lag between costs incurred and revenue recovered:** The current regulatory framework defers recovery of revenue into the future, which results in a time lag between when costs are incurred by the TNSP and when the revenue is able to be recovered. This principle is applied within the regulatory framework using an approach that indexes the RAB for inflation. For projects of the size of the major ISP projects, this creates concerns about whether the projects are investable, particularly when multiple large projects are undertaken concurrently.
5. **Calculation of benefits under the existing RIT-T framework:** The regulatory investment test for transmission (**RIT-T**) process is a valid and accepted means of testing whether the benefits of a project justify the cost to consumers. However, when the RIT-T is applied to nationally significant projects that have a benefit life greater than 20 years, cross state boundaries and/or are deemed critical for the long term security and reliability of the NEM, the RIT-T does not facilitate the inclusion of these benefits.

Each of these issues is discussed in more detail in the remainder of this submission below.

We propose that an alternative approval process is introduced for large and nationally significant transmission projects, in the same way that 'state significant' projects in other sectors are taken through alternative approval pathways to that used for standard developments. A bespoke process could accommodate the unique characteristics of these projects by recognising their scale and level of complexity, and ensure these important projects are able to be delivered to benefit consumers. This proposal is also discussed in more detail below.

We appreciate the opportunity to comment on your approach paper. If you would like to discuss this submission, please contact me or Neil Howes, Regulatory Affairs Manager on 0417 572 127.

Yours faithfully

Eva Hanly
Executive Manager, Strategy Innovation and Technology
Eva.hanly@transgrid.com.au

Further detail on key issues and proposal

This section sets out more detail on the key issues with the current regulatory framework in the NER that we have identified for large and complex transmission projects and our proposal to address issues with the contingent project framework in the NER as set out above.

Key issues with the current framework in the NER for the major ISP projects

It is difficult to estimate capital costs accurately prior to commencing the project for large transmission investments

Under the contingent project framework in the NER, a TNSP is required to submit its forecast of the costs of a large transmission project to the Australian Energy Regulator (**AER**). The AER then assesses the costs put forward by the TNSP to arrive at its view on the efficient costs of the project and provides the TNSP with enough revenue to recover these efficient costs.

Our experience of delivering large transmission investments in the ISP is that large scale transmission projects have unique characteristics that make it difficult for TNSPs and the AER to estimate capital costs accurately prior to commencement of the project.

In particular:

- The scale of the ISP projects is unprecedented and beyond the delivery capacity of many Australian construction companies, particularly given the current shortage in available labour and construction resources.
- Many of the projects are proposed to be constructed as greenfield projects in regional areas where there has been no previous transmission infrastructure constructed (or construction occurred many decades ago), resulting in unknown risks that are not able to be fully assessed until work commences, such as environmental, bio-diversity, geotechnical, land access and indigenous heritage risks.
- Broader economic changes (for example foreign exchange rates, commodity prices and interest rates) have a significantly greater proportional impact to the capital cost of large projects than they do to smaller projects.
- Unexpected global factors like COVID-19 can disrupt the sourcing of materials and labour, resulting in increased costs to source locally (where possible) or the need to revise how the program of works is sequenced.

While we use our best endeavours to accurately forecast the prudent and efficient costs of ISP projects at the required time and take project-level uncertainties into account in developing our cost forecasts, we do not consider it appropriate or reasonable that TNSPs bear the risk of unexpected costs for these projects, particularly given that the delivery and timing of these projects are being driven by the broader ISP process.

Investors are required to take an unprecedented amount of risk on large transmission investments if costs overrun

Under the NER, the AER may prevent a TNSP from recovering revenue related to capital expenditure that it has incurred above its capital expenditure allowance.

For standard regulated capital projects (for example a \$50 million project), unexpected cost overruns can be absorbed into a TNSP's existing revenue allowance over a five year period by re-prioritising other projects, as well as through the smoothing effect of other projects coming in under their expected cost. Therefore, a five year revenue allowance of several billion dollars can facilitate cost overruns and underruns which can be expected to occur on a TNSP's program of standard construction projects.

By contrast, a 10 percent cost overrun on large transmission investment required by the ISP (for example a \$1.5 billion project) cannot be absorbed within a TNSP's five year revenue allowance. In this scenario, a TNSP (and as a result, its debt and equity investors) would bear the risk of the

overrun given the potential for the AER to prevent a TNSP from recovering this expenditure as part of an ex-post review of capital expenditure under the rules. In addition, it is difficult for a TNSP to identify factors which may cause overruns upfront which increases the uncertainty that any fair cost overruns will be consequently approved by the AER. This issue represents an unprecedented level of risk for investments in large transmission projects.

TNSPs bear the risk of overruns on an ISP project and may therefore not have a reasonable opportunity to recover the efficient costs of the project. This risk is exacerbated by the uncertain nature (and possible large magnitude) of the costs at the time the AER locks in a TNSP's revenue allowance for a major project under the contingent project framework in the NER.

The involvement of multiple regulatory bodies is adding to the complexity of the approval process for large transmission projects

There are a number of regulatory bodies that are involved when large scale regulated capital expenditure is anticipated. In addition, when a project crosses state boundaries and/or is of national interest, multiple State Governments and the Federal Government may also seek involvement. While TransGrid views regulatory oversight of TNSP expenditure to be an essential part of the approval process, we consider that the current involvement of multiple regulatory bodies in the process is resulting in a longer and more complex process than is necessary.

In order to meet Government expectations of completion dates, this is resulting in Government offering underwriting of costs so that TransGrid can commence early capital works prior to regulatory approval. TransGrid is also funding (at risk) early works to accelerate these projects for Government stakeholders.

Time lag between costs incurred and revenue recovered

The current regulatory framework is designed to return the cost of efficient investment over the life of the assets – a principle often referred to as Financial Capital Maintenance. This principle is applied within the regulatory framework using an approach that indexes the RAB for inflation.

The current approach to RAB indexation defers recovery of invested capital until later in the lives of those assets by increasing their value each year by inflation and removing that increase (i.e. indexation) from the revenue recovered via annual tariffs. This effectively capitalises the inflation portion of the debt and equity returns to the RAB, resulting in a reduction in cash inflows from revenue in the initial years of the project's operations and a theoretical compensatory increase in later years.

In the case of a project or investment that is of a modest scale (such as a 'business as usual' (BAU) investment), this indexed RAB revenue profile can be managed within the existing means of the TNSP. However, for projects of a significantly larger size, such as the major ISP projects, BAU revenue is insufficient to support financing requirements over the period within which indexed RAB revenue ramps up for the particular projects. This is exacerbated where multiple major ISP projects are undertaken simultaneously. TransGrid is facing this predicament, particularly over the next 5-10 years.

Accordingly, RAB indexation appears likely to significantly impair our ability to finance large, non-BAU investments in a reasonable, value-accretive manner and we consider this to be a significant potential unintended consequence faced by those looking to build and own the major ISP projects.

Calculation of benefits under the existing RIT-T framework

The RIT-T process is a valid and accepted means of testing whether the benefits of a project justify the cost to consumers. However, when the RIT-T is applied to nationally significant projects that often cross state boundaries and/or are deemed critical for the long term security and reliability of the NEM, it does not facilitate including these holistic benefits.

Our understanding is that the RIT-T framework either excludes or places limited emphasis on:

- Additional gross benefits expected to accrue from major ISP projects beyond the 20-year time horizon adopted.¹ However, we note that the AER's draft cost benefit analysis guideline recognises that in the case of very long-lived and significant investments, it may be necessary to adopt a modelling period of 20 years or more.²
- Net consumer benefits, translating to lower residential customer electricity bills, arising from the material reduction in wholesale prices in NEM regions driven by improved access to cheaper sources of generation from neighbouring regions and increased generator competition.
- Additional 'non-monetised' benefits reflecting the strategic importance of the major ISP projects to future NEM development, including improving system stability and facilitating the transition of the NEM to a generation mix with a higher share of renewable sources.

These benefits from the major ISP projects are expected to be large in dollar terms and far exceed the interpretation allowed under the existing RIT-T framework.

A bespoke approval process for large and nationally significant projects is a potential solution to the issues relating to the existing contingent project framework

We submit that a bespoke approval process for large and nationally significant transmission projects is a potential solution to issues relating to the existing contingent project framework. This alternative process would include a single approval point, to ensure an efficient approval timeframe, as well as providing governance of a transparent and open book procurement process to be followed by a TNSP, in procuring the key design and construction contracts for the project. Independent experts, regulatory, consumer and government representatives would all be involved in the procurement process. Provided the approved procurement process was followed, the regulator would accept the ultimate contracted cost outcome of the project as the efficient costs of the design and construction elements of the project and these costs would be reflected in the TNSP's allowed revenue. This process has the potential to reduce investor uncertainty, reduce risk premiums, and reduce red tape and approval timeframes which would ultimately result in lower costs to consumers for large transmission projects.

¹ We note that, by way of example, the expected end of Project EnergyConnect's useful life is up to the 2070s.

² AER draft Cost benefit analysis guidelines - Guidelines to make the Integrated System Plan actionable, May 2020 p. 63