

9 June 2021

Energy Security Board

By email: [info@esb.org.au](mailto:info@esb.org.au)

## **Re: Response to Consultation on Post 2025 Market Design**

Spark Infrastructure provides long-term capital to support investment in a reliable and affordable low emission energy system. We currently have interests in some \$18 billion of electricity network assets, delivering energy to more than 5 million customers across the National Electricity Market (**NEM**). These interests include a 15% interest in TransGrid, the electricity transmission network in NSW including the recently announced Project EnergyConnect, a 49% interest in South Australian Power Networks, the electricity distribution network in South Australia, a 49% interest in both CitiPower and Powercor, two of the electricity distribution networks in Victoria and 100% ownership of Spark Renewables, a renewables platform which owns the fully operational 100MW Bomen Solar Farm in NSW, along with a renewables development portfolio in excess of 1.5GW of wind, solar and storage developments across the NEM.

### **Our interest in the post 2025 NEM design review**

Our interest in the Energy Security Board's (**ESB's**) post 2025 NEM design is to ensure an efficient and effective market that provides incentives to investors to provide the right investment at the right time and in the right place. Importantly, the market must avoid introducing additional risk and be resilient to government intervention to deliver the lowest cost of capital and as a result, the lowest cost electricity to customers when they need it and where they need it.

As a long term Australian investor in electricity infrastructure, we are excited by the opportunities to develop a portfolio of renewable generation to add to our existing Bomen Solar Farm, and to support the critical role of networks in providing the transfer capacity necessary to support new renewable generation, enhance grid stability and reliability, and establish distribution networks as a platform for services and distributed energy resources (**DER**). We are constantly assessing the risk and reward proposition of making these investments.

In developing our renewable generation portfolio, we take a disciplined approach to assessing system strength, risk of curtailment, likelihood of future losses and future wholesale prices. One of the greatest challenges to delivering new renewable generation is the risk associated with insufficient transfer capacity to support connection and dispatch.

In assessing the case for additional investment in our networks, we first ensure safety and compliance, seek to manage service outcomes and balance risks with the expected reward. The reward for investing in networks has never been lower and the risk associated with investing in major projects is higher than ongoing expenditure programs. There is a greater gap between the efficient cost of financing major projects and the compensation available under the regulatory framework.

### **The ESB's reforms should tackle all the issues hindering investment in renewable generation and Renewable Energy Zones (REZs)**

We support most of the reforms outlined in the ESB's Options Paper. However, we do not consider the transmission and access reforms will be sufficient to unlock the transfer capacity required to de-risk renewable generation connections and develop REZs to achieve the expected benefits. These reforms must include ensuring that the reward for network investment is commensurate with risk. If this were currently the case, investment would follow, and government support would not be required. There is no reason for an investor in regulated networks to delay investment unless the challenges under the regulatory framework are real.

We were pleased to be able to announce that TransGrid will proceed with Project EnergyConnect, the proposed 900km high capacity electricity interconnector between SA and NSW fundamental to unlocking the transfer capacity needed to support more renewable generation and benefit consumers for decades to come. However, this project needed the support of the South Australian government to underwrite early works and the Australian government's Clean Energy Finance Corporation (**CEFC**) to assist with the financing challenges for major projects under the regulatory framework and low regulated returns.

Despite this support, TransGrid's equity investors will continue to wear the risk that expenditure will be higher than the AER's forecast which will trigger penalties even if the higher expenditure is efficient. This will further reduce the expected equity return below the already low allowed return. These risks are heightened by the lack of review processes to support quality regulatory decisions and processes.

These issues are relevant to the connection of new renewable generation and integration of DER because of the critical role our networks play in the energy transition. Without sufficient transfer capacity, the risk of curtailment and losses will hinder the connection of new renewable generation and stall investment in REZs. Integrating DER, providing a platform for new services and markets, and meeting customer's needs will require new investment in capacity and technology. The challenges in the regulatory framework and continued focus on lowering returns at the risk of longer term impacts on consumers, must be addressed to unlock the benefits of the broader reform program.

Our views on the issues in the Options Paper are summarised below and expanded on in Attachment A:

- The reforms should aim to remove the need for government support for private investment, not accept it as an enduring feature.
- Contestability is not an efficient financing solution for major network projects. It will have little impact on reducing the cost of projects and may increase total costs to customers.
- We support two way markets, DER integration and targeted customer protections. Without customer protections, government will intervene to avoid price impacts on customers, and markets will fail.
- We welcome improvements in transmission planning, broader benefits (including emission reduction) and fairer cost allocation. Although these improvements will not be sufficient to deliver the transfer capacity required.
- We welcome a pragmatic approach to testing access models that limit physical connections and inform decisions about future access models.
- Returns commensurate with risk are required to facilitate efficient investment in network transfer capacity to connect new renewable generation and support DER.
- The relationship between regulated returns and network investment cannot be ignored. Networks have a critical role in the transition to a lower cost, low emission electricity system and delivering benefits to consumers expected from this reform program.

I am happy to discuss these matters further and can be contacted on 0421057821.

Yours sincerely,



**Sally McMahon**  
**Head of Economic Regulation and Energy Policy**  
**Spark Infrastructure**

## Attachment: Response to issues outlined in the Options Paper

### 1. The reforms should aim to remove the need for government support.

Government investment schemes and underwriting will dampen investment signals and create uncertainty and risk for new investment. A national approach that improves transparency and accountability can reduce the damage. However, underwriting should not be considered an enduring feature. The aim of the post 2025 NEM design reforms should be to reduce and remove the need for government underwriting altogether. If government underwriting becomes an enduring feature, private investment will remain reluctant, or only occur with government support<sup>1</sup>, and the efficiency of the new NEM design will be undermined. The case for government intervention must be clear and transparent.

The ESB suggests that regulated networks are reluctant to take risk and cope with financing very large projects. It is not rational or commercial for an investor in a regulated network to choose not to invest if returns are commensurate with risk. Enduring government intervention is evidence that they are not. Unless sufficient transfer capacity occurs, new generation will continue to face increasing risk of curtailment and unpredictable loss factors and governments will need to use taxpayer funds to support these projects.

### 2. Contestability is not a low cost financing option.

The ESB identified contestability as a financing option. We support increased contestability as a concept because it has the potential to reduce the costs to customers and reduce the barriers to delivering infrastructure across the NEM. However, contestability will only resolve the funding challenges where it is accompanied by flexibility in returns and revenue recovery over and above the regulatory framework. Transmission Network Service Providers (**TNSPs**) utilise competitive tender processes to ensure the lowest cost of delivering major projects, and the return on investment is set by the AER currently lower than international comparisons. Therefore, the additional cost savings that may accrue by requiring large network projects to be contestable are limited and unlikely to warrant the cost of implementing such an approach compared to addressing other features of the regulatory framework.

For example, the Offshore Transmission regime in the UK provides cost recovery over 20 years (rather than 40 plus years) with no periodic reviews by the regulator, contracted indexed revenues, protection from stranded asset risk, and returns commensurate with risk.<sup>2</sup> This approach brings forward revenue recovery (increasing prices to customers in the short term) but may not reduce the overall cost.

We note that the regulated return on equity applied to the South Australian, Queensland and Victorian DNSPs since the 2018 Rate of Return Instrument (**RORI**) has been between 4.56% to 5.7% (nominal post tax). This is significantly below the equity returns included in bids for the 2014 UK offshore transmission process (and not subject to periodic review) of around 10% nominal post-tax.<sup>3</sup>

Financeability assessments can be incorporated in the process for determining regulated returns to identify and inform responses to financing challenges for major projects and ensure that returns are sufficient to enable a benchmark entity to achieve and maintain the credit rating assumed in estimating the cost of capital. Regulators around the world adopt this approach by choice or obligation because it is considered good regulatory practice; demonstrating internal consistency in decision making and aiding transparency and accountability (even more important in Australia where review processes do not apply).

<sup>1</sup> Including from the Commonwealth Governments Clean Energy Financing Council (CEFC).

<sup>2</sup> KPMG, Offshore Transmission: An Investor Perspective – Update Report, Prepared for the Gas and Electricity Markets Authority, January 2014.

<sup>3</sup> KPMG, Offshore Transmission: An Investor Perspective – Update Report, Prepared for the Gas and Electricity Markets Authority, January 2014, p.23.

The AER has indicated that there is no need to undertake financeability assessments in determining the regulated rate of return. However, the AER has applied its own test and concluded that investors view regulated returns as being sufficient to attract investment.<sup>4</sup> We do not agree with this conclusion which appears to be based on historical transaction multiples and trading multiples for two listed entities with the benefits of a portfolio of regulated and unregulated businesses attributed to the regulated NSP. Further, the period reviewed was almost entirely before the 2018 RORI applied. We consider that an improvement to the RORI process would be to include a transparent test supported by all stakeholders that assesses whether the AER's estimate of the efficient cost of capital is the best estimate and, in turn, will provide compensation sufficient to support the credit rating metrics adopted in the estimate.

### **3. Reliance on markets, incentives and efficient pricing signals is appropriate.**

The need for change to better orchestrate the changing generation mix and the way customers use networks and services is apparent. The grid should support the efficient exchange of energy and the regulatory framework must evolve to better reflect the outcomes valued by customers. Markets, incentives, and pricing signals will support innovation and technological developments. However, these are best supported by targeted customer protection. The failure to provide these protections will lead to a failure in the markets as governments intervene with blunt instruments to prevent price increases that may be necessary and efficient to drive investment.

We support establishing essential system services markets. However, where it is more efficient and effective for the network operator to manage and provide these services in real time, such as system strength and inertia, this should occur through central provision and procurement by the TNSP to reduce the overall costs to customers.

### **4. We support two way markets and DER integration with targeted customer protection.**

We also support two sided markets to optimise the integration of markets for essential system services and DER that can better support the operation of the system, efficient matching of supply and demand, and the efficient delivery of system requirements and services to customers.

Key elements of the success of the DER integration program will be to enable two way energy flows and charging, establish the distribution network service provider (**DN**SP) as the distribution system operator, and ensuring appropriate customer protections.

Two way energy flows and charging will enable the distribution network to be utilised more efficiently and ensure that the cost of the network is shared appropriately between all users (rather than just those that cannot afford to invest in behind the meter generation). It will also provide a stronger signal, and incentives, for investment in the network to support the services desired by customers.

However, these markets will result in more consumers being exposed to efficient market pricing signals. Although efficient price signals would result in a lower cost system which reduces prices to all customers, prices to some customers may increase. Therefore, a package of targeted government initiatives to support those customers that need it will be necessary. This will reduce the cost of providing the support whilst avoiding the need to dampen signals and protect customers that do not need it.

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<sup>4</sup> AER, Electricity Network Performance Report 2020, September 2020, p. 50.

## 5. We welcome improved transmission planning, benefits assessment, and cost allocation.

The ESB's reforms in relation to transmission and access aim to ensure much needed transmission investment is delivered and used in a timely and efficient manner. We support the immediate reforms to identify and facilitate transmission and REZ investment through the Integrated System Plan (ISP). The ISP is sufficient to establish the benefits of Actionable ISP projects and including broader economic benefits (valued by government and taxpayers such as emission reduction) in the Regulatory Investment Test for transmission (RIT-T) can reduce the likelihood that projects that are valuable to Australians are held up in NEM regulatory processes. A further improvement in the RIT-T process would be to include any consequential network price increases alongside the expected total cost reductions to highlight the savings forgone if network projects are delayed or abandoned.

We encourage further investigation of cost allocation and recovery reforms. The current approach that requires that customers of the state based TNSP (or REZ) to pay for investments that will provide benefits to electricity customers in other states or taxpayers generally can attract disproportionate opposition that puts benefits to all customers at risk. We understand the ESB has already provided advice to NEM Ministers on these issues.

## 6. We support a pragmatic approach to testing the merits of access reform models.

Improvements to the access regime will not substitute for the timely and efficient investment in additional transfer capacity. This does not mean building out the existing system to remove all constraints but providing confidence to generators that if constraints worsen, additional capacity will follow in a timely manner where it is efficient.

We remain of the view that firm access and efficient investment in connection and transfer capacity is best supported by a physical limitation on new connections because it is more contractable and enforceable. We also remain of the view that locational marginal pricing (LMP) and financial transmission rights (FTRs) may be a costly and complex way of sending signals that risk of curtailment and expected loss factors already provide. Our views on this have been outlined in our previous submission to the ESB REZ framework review. We support the ESB's pragmatic approach to working through the concerns with LMPs and FTRs by developing an interim access model that can be tested and refined and inform decisions on future models.

We have also attached our submission to the NSW Governments Central West Orana Renewable Energy Zone Access Scheme Issues Paper<sup>5</sup> which also outlines our views about physical connection limitations being more likely to deliver the outcomes intended.

## 7. Returns commensurate with risk are required to facilitate efficient investment.

Improvements in the ISP and RIT-T processes and access reforms will not be sufficient to unblock investment in transfer capacity. A critical piece of the puzzle is ensuring efficient incentives to invest by providing regulated returns commensurate with risk.

The current regulatory settings deliver returns on network investment that are too low and regulatory risk that is higher for major projects. The risk of costs being greater than forecast for large infrastructure investment is much higher than steady state investment<sup>6</sup>, and where this occurs, the NSP is penalised even if the additional cost is efficient under the capital expenditure sharing scheme. There is no premium

<sup>5</sup> Spark Infrastructure, Response to NSW DPIE Renewable Energy Zones Access Scheme Issues Paper, 30 April 2021.

<sup>6</sup> AER, Letter outlining the work program to support efficient delivery of large transmission projects, 17 November 2020, Attachment, page 5.

on the regulated return to recognise this increased risk. This penalty is worn directly by equity investors, reducing the return expected below the allowed return that is already globally uncompetitive.

The AER's consultant, The Brattle Group, has confirmed that the equity returns in the 2018 RORI are globally uncompetitive as shown in its comparison of equity risk premiums across eight regulators in six countries as presented in the following slide.<sup>7</sup>

OBSERVED DIFFERENCES AND SIMILARITIES

## Equity and debt premiums

- We calculate equity and debt premiums as the difference between:
  - the authorised return on equity (or debt) and
  - the regulator's determination of the risk-free rate

	AER	ACM	FERC	STB	ARERA	NZCC	Ofgem	Ofwat
Decision year	2020	2016	2020	2018	2019	2019	2019	2019
Nominal risk-free rate [1]	1.03%	1.28%	2.70%	3.02%	1.89%	1.12%	-0.75%	-1.39%
Real risk-free rate [2]	-1.24%							
Equity premium [3]	3.66%	3.74%	7.35%	10.84%	3.88%	4.75%	5.55%	5.58%
Debt premium [4]	3.73%	0.76%		1.14%	0.50%	1.60%	2.68%	3.43%

Notes:

Please see Brattle paper for sources and calculations.

All figures relate to energy transport utilities except STB (rail) and Ofwat (water).

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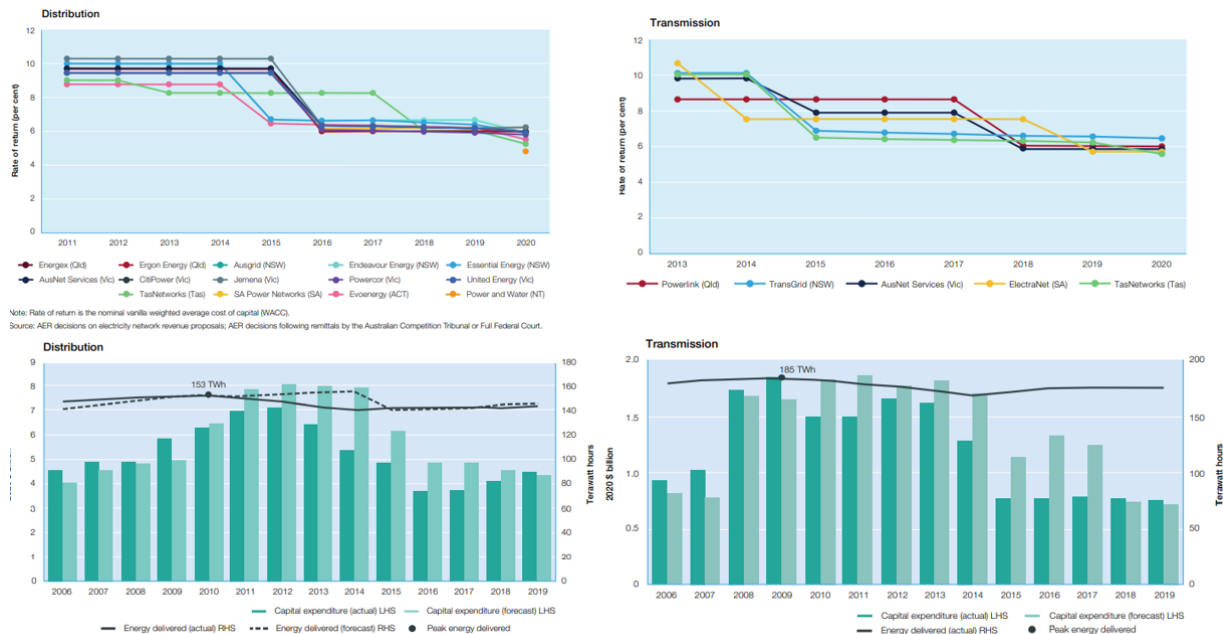
In the same way as expectations of future low wholesale prices can stifle investment in new generation, expectations that the regulator will continually seek ways to reduce regulated returns will stifle investment in regulated networks. This risk, and expectation, is heightened where there is no review of regulatory decisions and no demonstrable accountability.

Regulated returns that remain below the efficient cost of capital will have a detrimental impact on the long term interests of consumers. Although, this will be slow to reveal, over time, customers will experience slower and more costly connections, restrictions on solar panel installation and output, increases in prices as less new generation and increased congestion increase the cost of electricity, deteriorating service and higher costs generally as innovation and new technology development is stalled.

<sup>7</sup> The Brattle Group, Presentation to the AER's Stakeholder Forum, 16 September 2020, slide 11.

## 8. The relationship between returns and network investment is critical to the reforms.

The following charts from the AER's State of the Market Report<sup>8</sup>, illustrate the reduction in returns and investment over the 2011 to 2019 period.



Although established in December 2018, the lower return under the 2018 Rate of Return Instrument (RORI) is only applied in each subsequent determination, the first occurring in July 2019. Therefore, the impact on investment of the reduced equity returns will not be apparent until 2020.

The methodology for estimating equity returns in the 2018 RORI resulted in the significant falls in the risk free rate since 2018 being passed on directly in the form of even lower equity return in the determinations in 2020 and 2021. Therefore, except where government support is provided, we might expect investment in networks to fall even further over the next few years. It is critical to the effectiveness of the reforms that the relationship between returns, risk, and investment is understood.

To ensure that the returns on regulated network infrastructure are sufficient to attract capital and commensurate with risk, consideration should be given to enabling variations to regulated returns for higher risk projects, flexibility in revenue profile over the life of investment and mitigating cost recovery risk and penalties on efficient investment for ISP projects, and transparent financeability assessments. These decisions should also be subject to review in a draft decision and third party review process.

<sup>8</sup> AER, State of the Energy Market Report, July 2002, p. 148 and 156.