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Dr Kerry Schott AO
Independent Chair
Energy Security Board

Lodged via email: info@esb.org.au

Dear Kerry

National Energy Guarantee - Response to draft detailed design consultation paper

TransGrid welcomes the opportunity to respond to the Energy Security Board's draft detailed design consultation paper in relation to the National Energy Guarantee (Guarantee).

TransGrid is 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. TransGrid's network is also interconnected to Queensland and Victoria, and is instrumental to an electricity system that allows for interstate energy trading.

While TransGrid is not directly impacted by the Guarantee, we are interested in its development as it is a significant reform in the electricity sector. In addition, the implementation of the Guarantee will have a direct impact on our customers (i.e. generators and large energy users), and the costs and any benefits of the Guarantee will ultimately affect consumers.

We appreciate the opportunity to comment on this consultation paper and look forward to engaging with the Energy Security Board further on the Guarantee. If you would like to discuss this submission, please contact Neil Howes, Acting Manager, Regulatory Policy on 02 9284 3748.

Yours faithfully

A handwritten signature in cursive script that reads "Caroline Taylor".

Caroline Taylor
Acting Executive Manager, Regulation

1. Overview

TransGrid welcomes the opportunity to respond to the Energy Security Board's draft detailed design consultation paper in relation to the National Energy Guarantee (Guarantee).

TransGrid is 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. TransGrid's network is also interconnected to Queensland and Victoria, and is instrumental to an electricity system that allows for interstate energy trading.

As recognised by the Energy Security Board, Australia is in the midst of an energy transformation. This is primarily driven by changing community expectations and choices, advances in renewable energy technologies, retirement of existing generation, and the adjustments required in Australia's economy to meet our international climate change commitments. These changes raise complex issues in relation to the design of the National Electricity Market (NEM) and have led to a greater focus on ensuring reliability of supply and where that supply comes from.

The NEM governance framework must adapt to these changes and provide the basis for low emissions, reliable supply at the lowest cost to consumers over the long run.

While TransGrid is not directly impacted by the Guarantee, as the transmission planner in New South Wales and operator and manager of electricity infrastructure with long operating lives we are interested in the development of the Guarantee. The development of the Guarantee is a significant reform in the electricity sector and its implementation will have a direct impact on TransGrid's customers (i.e. generators and large energy users). In addition, the costs and any benefits of the Guarantee will ultimately affect consumers.

In this context, TransGrid supports a mechanism which aims to better align energy and climate change policy to drive emissions reductions while supporting reliability of the electricity system.

The Energy Security Board has made significant progress in the design of the Guarantee since the draft design was consulted on in February this year. In particular, we note that the Energy Security Board has since made changes to the design of the Guarantee which go a significant way to addressing concerns raised by TransGrid with the initial draft design.

However there are still some details in the draft detailed design of the Guarantee that need to be worked through – in particular with the reliability requirement – which means that it is still not possible to fully understand the market and consumer impacts of the Guarantee at this stage. We are also still concerned about the short timeframe in which the Guarantee is being developed given its significance to the NEM and more broadly the importance of electricity to a well-functioning economy.

This submission sets out:

- > Our understanding of the Guarantee.
- > Our views on transmission investment and demand response in the reliability requirement of the Guarantee.
- > Our assessment of the Guarantee against desired policy outcomes.

2. Our understanding of the Guarantee

TransGrid understands that the Guarantee will require retailers to contract with generation, storage or demand response so that:

- > There is a minimum amount of 'dispatchable' electricity available to meet consumer and system needs when a material gap is identified by the Australian Energy Market Operator (AEMO) and verified by the Australian Energy Regulator (reliability requirement).
- > The average emissions level of the electricity they sell to consumers supports Australia's international emissions reduction commitments, as set by the Commonwealth Government (emissions reduction requirement).

We understand that renewables generators are able to contribute to the reliability requirement of the Guarantee. However, it is still unclear how the degree of 'firmness' will be determined. It is therefore still difficult to assess the full impact of the reliability requirement part of the Guarantee at this stage.

More generally, we understand that the reliability requirement is intended to provide a mechanism to drive retailer behaviour. And it is the intention of the Energy Security Board that other reliability mechanisms such as the reliability and emergency reserve trader (RERT) sit alongside this requirement as part of a broader NEM reliability framework.

Compliance with the emissions requirement will be facilitated through the use of an emissions registry which will allocate generator output and its associated emissions to a market customer's load. This represents a clarification in the design of the Guarantee since it was last consulted on publicly, in February this year.

3. Transmission, demand response and the reliability requirement in the Guarantee

3.1 Transmission investment and the Guarantee

The Energy Security Board identifies transmission investment as a means of meeting a reliability gap in the detailed draft design consultation paper.¹

Transmission investment is a cost-effective approach for integrating and aggregating a large share of variable renewable energy resources and maintaining energy security. The potential for transmission investment including interconnectors to meet reliability needs as an alternative to generation is also recognised by the regulatory investment test for transmission.² This test assesses the costs and benefits of alternative options including network and non-network alternatives.

The Energy Guarantee should facilitate efficient investment noting that the lead times required to deliver transmission investment tend to be between 4 and 6 years. This is in the long term interests of consumers because transmission networks decrease the wholesale costs of electricity by increasing access to low cost generation and promoting competition between generators.

As the reliability requirement is intended to provide an obligation on retailers to behave in a certain way and drive efficient investment, it follows that the impact of the reliability requirement of the Guarantee should also be taken into account when considering market benefits in a RIT-T. TransGrid submits that it would be appropriate for the AER to consider and provide guidance on how the reliability requirement of the Guarantee be taken into account in a RIT-T as part of its current review of the RIT-T application guidelines.

The draft detailed design of the Guarantee requires the triggering of the reliability requirement if a 'material' reliability gap is identified in AEMO's forecasts three years out. The Energy Security Board proposes that AEMO will determine what constitutes a material gap in guidelines. These guidelines would be developed in accordance with principles in the National Electricity Rules. TransGrid submits that the Rules provide clear

¹ Energy Security Board, National Energy Guarantee, Draft detailed design consultation paper, 15 June, 2018, p. 6.

² Rule 5.16 of the National Electricity Rules.

guidance to AEMO on the development of a definition of a material gap. However, we recognise that there needs to be some flexibility for AEMO in the development of a definition.

We note that additional clarity on what constitutes a 'material' gap is required to fully assess the impact of the reliability requirement in the Guarantee. We also ask the Energy Security Board to give further consideration to whether a three year reliability trigger provides the right investment signals.

In light of the importance of the ten year reliability forecasts prepared by AEMO under the Guarantee, we welcome the development of an accountability framework to support and improve these forecasts as proposed by the Energy Security Board. We also welcome a requirement for AEMO to undertake stakeholder consultation in the preparation of these forecasts as is currently undertaken in relation to AEMO's current forecasts, and are keen to be involved in this process.

We support the Energy Security Board's view that interregional contracts can count towards the reliability requirement. However, we note that it is still unclear how 'firmness' of contracts will be determined as previously noted above.

More generally, the reliability requirement of the Guarantee should be designed to minimise the likelihood that AEMO will need to access the reliability and emergency reserve trader (RERT) framework which is an expensive means of meeting demand.

3.2 Demand response and the Guarantee

We note that demand response will be recognised as a form of dispatchable capacity under the reliability requirement of the Guarantee. TransGrid supports the use of technically feasible and cost-effective demand response in the NEM. The current market for demand response in the NEM is relatively immature and the full potential of innovation in demand response is yet to be realised. In relation to this, the Australian Renewable Energy Agency and the AEMO are undertaking pilot projects under a demand response initiative to manage electricity supply during extreme peaks.

TransGrid has experience in the procurement of demand response. As part of our Powering Sydney's Future RIT-T process we ran an Expression of Interest for non-network alternatives to help assess whether a non-network solution could be used to defer the project or to reduce the risk of unserved energy. As a consequence of this process, we proposed a four year demand management program to help manage the risk of unserved energy and economically defer capital investment in the network. We currently have a demand management tender out for next summer as part of Powering Sydney's Future.³

As a network service provider, TransGrid is supportive of demand response as it allows transmission businesses to be more responsive to changes in demand forecasts and the needs of consumers. The regulatory framework should allow for innovation by transmission businesses to actively build up the market, in the same way that an innovation scheme has been introduced for distribution businesses.

Demand response can offer services along the supply chain and it is important that these services can be defined and potentially separated between wholesale, transmission and distribution. If there are multiple demand response markets operating across the supply chain, we might need a system operator to dispatch resources in an orderly way so that a dynamic response to a wholesale signal does not create issues in a local distribution system for example.

Transmission network service providers would be well placed to provide this role due to their visibility of both system-wide and local issues. TransGrid would be willing to play a part in providing demand response under the Guarantee. However, there are barriers to this under the current regulatory framework.

4. Assessment of the Guarantee against desired policy outcomes

TransGrid supports a mechanism which aims to better align energy and climate change policy to drive emissions reductions while supporting reliability of the electricity system.

³ <https://www.transgrid.com.au/transgrid-opens-40mw-demand-management-tender-for-sydney-cbd>

In our submission to the draft design of the Guarantee published in February this year, TransGrid outlined a set of policy principles that the Energy Security Board should consider in developing the Guarantee. We believe that the draft detailed design has gone a significant way to addressing these principles and suggest that they are considered further as the details of the design are developed.

In undertaking the detailed design of the Guarantee, we recommend that the Energy Security Board further consider the following principles:

Long-term policy certainty: The Guarantee will be effective if it provides long-term stability for producers and consumers of electricity. Policies to underpin the energy system transition must provide long term certainty that allows for bankable decisions by investors to ensure the orderly development of new generation capacity as required to meet energy demand as ageing thermal generators reach end of life, at the lowest cost for consumers. This certainty will help guide investment decisions by producers and guide consumers in making choices about their energy needs. TransGrid considers the draft detailed design of the Guarantee provides a framework for long term policy certainty.

Liquidity and long-term price outcomes: The Guarantee will not be effective if it reduces the liquidity of the contract market. TransGrid welcomes changes to the design of the Guarantee to address our concerns that the design may lead to a fragmentation of the contract markets which may reduce liquidity in these markets. These changes relate to not requiring the linking of contracts with physical generation. A more liquid market is likely to lower the cost of trading or investing (through reduced volatility) and therefore is expected to be reflected in better long-term price outcomes for consumers.

Transparency of wholesale electricity prices: Transparent prices are a characteristic of efficient markets and these are currently facilitated in the NEM through a gross pool market design. We support the additional measures in the Guarantee to promote transparency, in particular, the market liquidity obligation and the use of trade repositories in the event that the reliability requirement of the Guarantee is triggered. To improve the level of transparency, we would recommend that the emissions registry is made publicly available. In line with this proposal, we note that the ACCC has recommended similar changes to improve transparency and competition in the electricity contract market. In particular it has proposed that over the counter trades should be reported to a repository administered by the AER and publicly disclosed in a de-identified format.⁴

Promote competition: TransGrid considers that an effective Guarantee will enhance competition and not further entrench existing market power or create barriers to entry for new market entrants. This includes considering the compliance burden, which may act as a largely fixed cost and therefore disproportionately impacting small generators and retailers. TransGrid welcomes the suite of measures that the Energy Security Board proposes to introduce into the design of the Energy Guarantee to address competition concerns. In particular, the market liquidity obligation in conjunction with the use of trade repositories as well as the proposed voluntary book build, in the case that the reliability requirement is triggered.

Simplicity and cost effectiveness: The Guarantee will be effective if is simple and easy to administer and minimises compliance costs which are ultimately borne by consumers. We welcome the steps the Energy Security Board has taken to improve the simplicity of the Guarantee, in particular how the level of emissions will be allocated to retailers. We also support the way that the Guarantee is proposed to integrate into existing frameworks which reduces the compliance burden. However, as a scheme of this nature is inherently complex, it is important that compliance measures are both effective and efficient so as not to have an adverse impact on competition in the market and prices for consumers.

Flexibility: Consistent with Australia's international commitments, a well-designed Guarantee is likely to facilitate a progressive reduction in greenhouse gas emissions from the NEM and have the flexibility to allow for the adjustment of emissions targets over time. We do not see any limitations in the structure of the Guarantee which would limit the target from being changed over time. However, to facilitate greater flexibility the target could be reviewed more frequently than five years.

Oversight: We note that the Energy Security Board has proposed that the majority of the Guarantee be implemented through amendments to the Australian Energy Market Agreement, the National Electricity Law and the National Electricity Rules. A key benefit that the Board has identified is that the existing framework would enable refinement across time without large-scale reviews. TransGrid supports this governance

⁴ ACCC, Restoring electricity affordability and Australia's competitive advantage, Retail Electricity Pricing Inquiry – Final Report, June 2018, p. 7.

approach which allows for ongoing refinement through consultation and avoids constant ongoing changes which would increase policy uncertainty.

5. Summary

The Energy Security Board has made significant progress in the design of the Guarantee since the draft design was consulted on in February this year. In particular, we note that the Energy Security Board has since made changes to the design of the Guarantee which go a significant way to addressing concerns raised by TransGrid with the initial draft design.

However there are still some details in the draft detailed design of the Guarantee that need to be worked through which means that it is still not possible to fully understand the market impacts of the Guarantee at this stage. We are also still concerned about the short timeframe in which the Guarantee is being developed given its significance to the NEM and more broadly the importance of electricity to a well-functioning economy.