

18 May 2018

Ms Therese Grace
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235



Business SA
Chamber of Commerce
and Industry South Australia

ABN 000 14 725 309 328
Level 1, 136 Greenhill Road
Unley South Australia 5061
T: +61 8 8300 0000

Dear Ms Grace

I write in response to your request for submissions to the AEMC's discussion paper on coordination of generation and transmission investment, including the development of Renewable Energy Zones (REZs).

Working for your business.
Working for South Australia

Executive Summary

- Business SA supports the AEMC's work to develop the Finkel Review proposal of renewable energy zones to ensure that as a nation, we build the renewables where they are best placed to generate power and support that objective with a sufficient level of transmission infrastructure, including between respective jurisdictions of the NEM.
- Business SA is mindful that there are already constraints on non-synchronous power generation in South Australia, namely wind, and work to integrate more renewables into our State and beyond needs to consider how that will occur when we are not yet able to fully optimise the generation potential of what we already have.
- Building more transmission infrastructure to facilitate REZs across the NEM needs to be complimented by work to ensure that with less synchronous generation in the system, that market issues such as the practical inability for retailers/businesses to contract firm over interconnectors is prioritised to ensure existing competition issues for firm contracts are not further exacerbated.
- Consideration of existing transmission pricing structures and how they incorporate the build out of renewables to meet a national climate policy must form part of the AEMC's considerations in its final report, particularly to protect the long-term interests of consumers in each NEM jurisdiction.

Should you require any further information or have questions, please contact Andrew McKenna, Senior Policy Adviser, on (08) 8300 0000 or andrewm@business-sa.com.

Yours sincerely,

Anthony Penney
Executive Director, Industry and Government Engagement





Why this matter is important to South Australian businesses

As South Australia's Chamber of Commerce and Industry, Business SA is the peak business membership organisation in the State. Our members are affected by this matter in the following ways:

- The increase in electricity prices, particularly over the last two years, has had a devastating impact on South Australian businesses with major spikes for both small and large market customers; bills typically increasing between 30% and 75% depending on the volume of electricity use.
- South Australia's electricity market has changed substantially since Alinta's announced Northern Power Station withdrawal in 2015 set off the futures market, followed by its actual closure in 2016 which impacted the physical market; resulting in high priced gas fired electricity being the only firm contract source for local businesses.
- South Australian businesses recognise the need to do their share of carbon reduction in accordance with Australia's national target but cannot afford to go beyond that when price constrained against their interstate and overseas based competitors.
- While South Australian businesses recognise the need for constraints to enable sufficient synchronous generation online, limiting wind generators and the interconnector to protect reliability, this is also coming at a cost by not allowing the maximum amount of lowest marginal cost generation online at any given point in time, and limiting those times when cheap wind can set the regional price.

Key Policy Points

1. Your discussion paper raises several critical questions, what is a REZ? who pays for the investment required to develop one? and who bears the risk of the REZ not developing or operating as planned? Furthermore, you acknowledge the central consideration being that transmission investment is provided in a way which is consistent with the long-term interests of consumers. While Business SA strongly supports this notion, we stress that the specific impact on consumers is determined by their individual NEM jurisdictions which must form part of measuring how the broader interest of consumers is protected.
2. In relation to the question of defining a REZ, Business SA supports the AEMC's proposition that the Eyre Peninsula is the best live example of a potential REZ, particularly given the significant transmission investment being considered by ElectraNet to facilitate more wind farms extends well beyond the minimum investment required to maintain reliability.

For the record, Business SA has long supported a focus on improving and ensuring electricity reliability on the Eyre Peninsula, particularly after the significant impact on businesses from losing power for several days following the September 2016 state-wide blackout, in combination with other weather related events which occurred in the second half of 2016.

Notwithstanding, in our recent submission on the RIT-T for ElectraNet's planned transmission upgrade on the Eyre Peninsula, we recognised that the preferred option of a double-circuit 275KV transmission line from Cultana to Yadnarie, connecting to a double-circuit 132KV line to Port Lincoln for an estimated \$300 million, was not predicated on just improving reliability or enabling proposed mining projects, rather facilitating potential wind generation projects.

While there is no doubt that ElectraNet should be upgrading its transmission infrastructure to ensure reliability on the Eyre Peninsula, Business SA has some reservations about how much of the additional cost to upgrade to a part 275KV line to enable new wind farms will be borne by South Australian electricity consumers.



Unfortunately the AEMC's summary of ElectraNet's proposal described in Box 5.3 does not specifically articulate that ElectraNet's preferred option is only justified on the basis of potential benefits from future wind farms, and furthermore does not rely on future mining developments. Business SA accepts that ElectraNet's analysis demonstrates market benefits which would make the preferred option more viable than just reconductoring the existing transmission line and maintaining back-up generation in Port Lincoln, but the fact remains these additional market benefits are predicated on the construction of wind farms.

3. To practically consider how transmission investment under REZs is provided in a way which protects the long-term interests of consumers, the AEMC needs to consider how existing interjurisdictional cost sharing arrangements work in practice. While the current Inter-regional Transmission Use of System (TUOS) mechanism allows for recovery of charges from jurisdictions which use South Australia's transmission network, no mechanism exists to recover costs specifically related to infrastructure built to facilitate additional renewable energy required to meet Australia's renewable energy target (RET), which is intrinsically linked to Australia's carbon reduction target.

Business SA appreciates the AEMC is looking to ensure that renewables delivered through REZs are delivered at lowest cost across the NEM, however the reality for consumers is that we are all in individual states which are subject to very specific transmission infrastructure costs related to our regional jurisdiction within the NEM. This reality was recognised by the Energy Security Board when it released its advice on the likely price outcomes of the National Energy Guarantee (NEG) which it provided for each NEM jurisdiction.

It is our view that the costs of achieving a national emissions reduction task, to the extent that is practicable, should be evenly distributed, no differently to how the existing system of horizontal fiscal equalisation of the GST works to equalise GST payments to mitigate against the natural advantages one state might have over another, for example access to mineral resources. While South Australia and Tasmania may have access to superior 'natural resources' to generate renewable energy beyond their per capita share, we should not be financially penalised for doing so. Businesses in South Australia are not against paying our way, but we need to acknowledge that South Australia has already done more than its share of heavy lifting on national emissions reductions by virtue of our state achieving 50% renewable generation in 2016, 3 times the national average of approximately 17%¹ on the way to the national 2020 RET of 23.5%.

While South Australia's achievement is positive for the environment, businesses cannot typically hedge with solar or wind farms which has limited our members' ability to access firm contracts that are only available through high priced gas generators. Alternatively, businesses have been forced to manage on the spot market with its inherent challenges as the most volatile commodity market in the world. Although derivative products can assist businesses with managing electricity exposure on the spot market, these can also be quite expensive, as can back-up diesel generators to provide a physical hedge. Furthermore, current constraints on low cost wind generation and interconnector imports from Victoria are eroding the value for businesses of being exposed directly to the spot price, particularly during periods when wind power could be setting the regional price.

¹ AER, State of the Energy Market, May 2017



4. It is fair to say that in South Australia, demand response is becoming more attractive to businesses, particularly when they have adequate data availability to understand their electricity use at a sufficiently granular level to enable the curtailment or shutdown of various plant and equipment at times of peak network demand. Business SA recently provided a briefing for members on demand response which highlighted that the financial incentives in the market are beginning to appeal to a broader range of businesses beyond the major users which might have traditionally dealt directly with AEMO. It is also positive to see incentives which are available to businesses which are not exposed to the spot market, considering the vast majority of businesses still prefer to be on an affordable fixed price contract.
5. Business SA recognises that at the time the NEM was founded in the late 1990s, the implementation of nodal pricing was considered too complex and most likely with the characteristics of generation investment at that time, any economic efficiency benefits would not have justified the costs.

It is now two decades on and the composition of generation in the NEM is vastly different, primarily characterised by a significant proportion of intermittent renewable generation. This has materially altered the way in which consumers can access firm contracts, which is particularly relevant for large market customer businesses based in South Australia.

The Australian Chamber of Commerce and Industry (ACCI), in collaboration with Business SA, recently procured leading engineering firm Aurecon to investigate the options for how NEM pricing boundaries and the interaction between jurisdictions could be altered to provide better price outcomes for consumers. While this research did not extend to full scale market modelling, Aurecon stated that *'the NEM's pricing structure is inextricably linked to the physical system and should be considered in any future system studies. Given the significant policy developments and transition in the NEM, a cost-benefit analysis of a nodal market should be pursued and the opportunities for smaller or larger regions should also be considered as part of a holistic approach to planning its future.'*²

Further in relation to nodal pricing, Aurecon found that in a large scale renewable future, network infrastructure within existing regions could become key constraints. To overcome this, the existing regions could be broken into smaller zones where new boundaries delineate these potential constraints. Aurecon also considered an alternative future where distributed renewable generation was a much larger component of demand and larger regions might increase competition, provided there was sufficient investment in additional interconnection to alleviate constraints.³

Acknowledging that the AEMC has considered nodal pricing in its discussion paper with some reservations based on past experience during the NEM's formation, Business SA requests more work be done on how a restructure of NEM pricing regions, including the consideration of nodal pricing, could work to enhance the value of new transmission infrastructure to facilitate REZs. This is particularly relevant when considering the possibility that additional interconnection should improve the ability for businesses to access firm contracts between regions, a factor of the negligible probability that two independent transmission lines hundreds of kilometres apart would fail simultaneously.

² Aurecon, 'Exploring regional boundary definition and pricing models in the National Electricity Market', November 2017, p III

³ Aurecon, 'Exploring regional boundary definition and pricing models in the National Electricity Market', November 2017, p III



The advent of firm contracting between regions could significantly alter the competition dynamics within the NEM and see it deliver the benefits of being a truly national market, rather than just a series of partly connected state-based markets. Business SA first began raising the need for firm contracting between regions in 1999, and considering the underlying structure of generation in South Australia has changed markedly in the two decades since, this is now a much more significant need than it was in the beginning of the NEM.

Business SA acknowledges the AEMC's discussion paper finding that 'Price divergence between the regions principally reflects constraints on the free transfer of electricity since regions are connected between interconnectors, with limited capacity'⁴. While we recognise this in of itself insufficient justification to build additional interconnection, if new interconnection is to be constructed to facilitate REZs, it should be integrated within a restructure of the NEM's pricing regions to enable firm contracting between regions. Although there may always be some need for local firm generation in each region to preserve system strength, this should not block consideration of the broader benefits of increased interconnection.

6. Under the AEMC's proposed option 4, where the Transmission Network Service Providers (TNSPs) make speculative investments on behalf of consumers to facilitate a REZ, we acknowledge your conclusion that if this approach were taken in 2008, a significant amount of transmission infrastructure would have been built to facilitate 2,200 MW of proposed geothermal generation which did not come to fruition. Consequently, consumers would have paid for stranded assets.

The AEMC's idea of a staged approach where multiple potential REZ were identified, then narrowed down to a final selection based on factors such as the level of generator commitment, seems like a practical approach to solving the 'chicken and egg' phenomenon; on the basis that transmission pricing structures appropriately distribute costs to consumers. In the case of ElectraNet's proposed Eyre Peninsula upgrades, without any public commitments from wind generation companies, South Australian business consumers more broadly feel too exposed to future costs they may bear through existing transmission pricing structures.

7. At present there are a number of electricity system constraints being enforced by AEMO to ensure adequate system strength in South Australia. These include system strength dependent limits on the operation of non-synchronous generation above 1,295 MW, namely wind, plus a complex set of synchronous generator configurations, of which one needs to be operational at any given time. There are also limits on the existing Heywood interconnector in certain circumstances to maintain the upgraded rate of change of frequency (ROCOF) constraints introduced after the State-wide blackout.⁵ The reality is that all of these limits, albeit necessary at this point in time to keep the lights on, are also distorting the market by not always allowing the lowest marginal cost source of generation online at any given time, and to set the regional price. Subsequently, if South Australian consumers are expected to fund further transmission investment on the back of REZ or some other incentive to build out more renewables, is that investment necessarily going to attract renewables at the rate otherwise expected when non-synchronous generation is unencumbered? Alternatively, is it going to provide the lowest cost power to local consumers when renewable energy developers face these constraints? These are all questions which should be considered for any market benefits type test, and Business SA requests the AEMC explore this conundrum further in its final report.

⁴ P18

⁵ AEMO, 'Transfer limit advice – South Australia System Strength', May 2018