13 July 2018

Dr Kerry Schott
Chair
Energy Security Board

Lodged by email: info@esb.org.au

Dear Dr Schott,

Submission to NEG draft detailed design consultation

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit legal centre based in New South Wales. Established in 1982, PIAC tackles systemic issues that have a significant impact upon people who are marginalised and facing disadvantage. We ensure basic rights are enjoyed across the community through litigation, public policy development, communication and training. The Energy + Water Consumers' Advocacy Program represents the interests of low-income and other residential consumers, developing policy and advocating in energy and water markets.

PIAC welcomes the opportunity to respond to The Energy Security Board's (ESB) consultation paper on the draft detailed design for the National Energy Guarantee (NEG). PIAC has also contributed to and supports the submission from the Australian Council of Social Services (ACOSS) to this consultation process.

Emissions reduction is essential across the Australian economy. This must be achieved in a way that is rapid, affordable, equitable and inclusive. The National Energy Market (NEM) needs immediate action to lock in low emission and zero emission generation since emissions accumulate year on year in the atmosphere, and hence the benefits of avoided emissions similarly accumulate. The electricity sector is well placed to achieve significant emissions reductions in a timely and cost-effective manner given the range of low emission generation technologies such as wind and solar that are already commercially viable and other technologies reaching this stage.

PIAC focusses its comments on the proposed design, governance and implementation of the reliability obligation.

In PIAC's view, the design of the reliability component of the NEG should not impose unnecessary risks on market participants, particularly new entrants and smaller retailers. It must not result in higher than efficient costs for consumers without providing benefits beyond those achievable under current arrangements. These issues are outlined in Attachment 1.

A guiding principle for the design should be that the reliability obligation has a completely benign effect on the market while it is not triggered. As such, PIAC welcomes a number of the additional changes made to the design, governance and operation of the reliability obligation since the previous round of consultation.

Forecasting a reliability gap

PIAC supports the enhancement of AEMO's existing Electricity Statement of Opportunity (ESOO) to forecast any future reliability gap. Any gap should be expressed not only in terms of Unserved Energy, as this aligns with how the

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Reliability Standard is expressed, but also in other terms which are more immediately relevant to sizing and procuring efficient solutions.

For example, the forecast should also give guidance as to whether it would be a short-lived event (e.g.: a critical peak event that could be addressed by procuring fast-response/short-duration generation and DR which would only need to act for an hour) or a more sustained event (e.g.: a supply shortfall for most of the day that would require a longer-lasting response). It should also give guidance as to whether it is likely to be a single event during the forecast period or whether it may be recurring over multiple days or weeks.

Triggering the reliability obligation

PIAC supports the AER being the independent entity to approve triggering the reliability obligation on request from AEMO. The decision to trigger the reliability obligation may have a material impact on the market, with potentially significant effects on the cost of supply, which is ultimately borne by consumers. Hence, it is essential that the obligation only be triggered where it is clear that the benefit to consumers outweighs the costs.

To this end, PIAC supports creating objective criteria for whether a *material* reliability gap is forecast to exist. The criteria and process for determining materiality should be set out in a guideline and subject to public consultation.

PIAC supports the suggestion in the ESB's paper that it could be defined "*as a percentage of maximum demand in a region persisting for a given period of time.*"[1] Further, PIAC suggests the materiality criteria explicitly consider whether the gap is forecast to occur over successive years. This should prevent the obligation being unnecessarily triggered for a single-year 'blip' in the forecast caused by assumptions of exactly when a load/generator will actually enter/exit the market.

The importance of wholesale demand response

In PIAC's view, any part of the energy system that does not fully employ demand response (DR) where it is cost effective to do so, cannot be considered to operating efficiently. This applies equally to distribution, transmission, wholesale, and retail.

A larger pool of DR providers, independent of energy retail arrangements, can defer or completely avoid the need to trigger the reliability obligation of the NEG.

While demand response is increasingly being used in the other stages of the supply chain, PIAC considers its use in the wholesale market is considerably lacking. While retailers are able to engage in demand response under the current regulatory arrangements if they choose to, the NEM remains a generation-only wholesale market. When compared to energy markets with effective mechanisms for demand response,[2] the amount of DR in the NEM is trivial. The ability for demand reduction to be able to bid into the wholesale market, independently of energy purchasing arrangements, is essential for it to operate efficiently and in the long-term interest of all consumers.

PIAC strongly supports the introduction of a mechanism for wholesale demand response independent of energy purchasing arrangements, as flagged in the AEMC's Reliability Frameworks Review and noted in our submission to the AEMC's Directions Paper.

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1 Energy Security Board, *National Energy Guarantee: Draft Detailed Design Consultation Paper*, 36.

2 For example, over 10% of the WA energy market's capacity is sourced from demand response.

Continued engagement

PIAC would welcome the opportunity to meet with the ESB and other stakeholders to discuss these issues in more depth.

Yours sincerely,

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Attachment 1: Reliability in the NEM

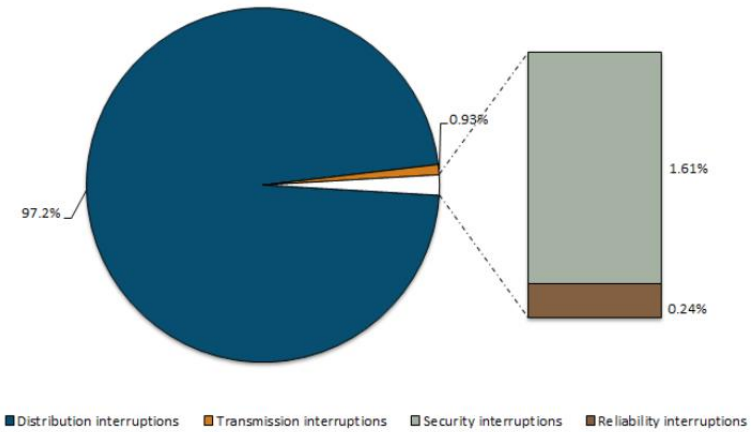
Despite recent media attention around the apparent lack of reliability of generation supply in the NEM, numerous studies have shown that this is not the case.

Central to this issue is the concept and level of the Reliability Standard which is defined as 0.002% expected Unserved Energy (USE) in a region per year. In PIAC's view, it is essential that this standard is not viewed as a value that should not be breached in any given year. To do so would lead to inefficient investment as consumers ultimately funded diminishing returns. More specifically, it would be counter to the cost-reliability trade-off that many consumers would choose. For instance, consumers in regional areas participating in network engagement forums that PIAC has attended have voiced their satisfaction with current reliability levels.[3] These consumers are more concerned with affordability and are prepared to accept lower reliability as a way of controlling costs.

For instance, modelling conducted for AEMO's Electricity Statement of Opportunities (ESOO) shows little if any forecast reliability shortfalls anywhere in the NEM and far fewer breaches of the Reliability Standard of 0.002%. Queensland and Tasmania have no forecast USE at all for the next 10 years. New South Wales has relatively small levels of USE forecast but no forecast breaches of the Reliability Standard even in the high forecast scenarios. The only forecast breaches are in Victoria and South Australia under the highest forecast scenario and only for a single year – 2017/18, which has passed.[4]

Separate modelling conducted by EY for the AEMC Reliability Panel's 2018 Reliability standard and settings review shows substantially lower forecasts of USE out to 2023-24.[5] Where any USE is forecast at all, it is three orders of magnitude below the reliability standard.

Figure 1 illustrates that, historically, supply interruptions for distribution connected customers have mostly originated in their distribution network, with a smaller number in the transmission system, and a negligible portion as a result of generation shortfalls.



Source: AEMC analysis and estimates based on publicly available information from: AEMO's extreme weather event and incident reports and the AER's RIN economic benchmarking spreadsheets.

Figure 1 Proportion of supply interruptions (in GWh) in the NEM from 2007/8 to 2015/16 by source[6]

3 Woolcott Research and Engagement, *Engagement Programme Summary Report – Phase 1, Prepared for Essential Energy*, 2017, 8. PIAC is also preparing a report outlining and assessing the customer engagement done by NSW DNSPs which will be published in 2018.

4 AEMO, *Electricity Statement of Opportunities 2017*.

5 AEMC Reliability Panel, *Reliability Standards and Settings Review 2018.*

6 AEMC, *Annual Market Performance Review 2017,* xviii.

While maintaining system reliability and security is clearly important, the data suggests that even a significant increase in generator and transmission outages will have little appreciable impact on consumers. It follows that spending billions of dollars to improve reliability in generation and transmission may not bring commensurate benefits for consumers.

PIAC is concerned that, if full regard to the cost impacts and consumer expectations is not given in developing new reliability measures, we will end up with a gold-plated wholesale market.