26 April 2017

Mary O'Kane
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Dear Professor O'Kane

NSW Energy Security Taskforce

PIAC welcomes the opportunity to respond to the Taskforce's invitation for submissions to the review. PIAC's submission to the Finkel Review is attached for your consideration.

The taskforce has been provided with the following scope:

- asses the risks to and resilience of the NSW electricity system (including the transmission and distribution networks), from extreme weather events in the context of a changing climate
- review the adequacy of the State's management of electricity system security events including prevention, preparedness, response and recovery
- make recommendations on actions to address any vulnerabilities identified and/or opportunities for improvements in current practices

Additionally, the ToR acknowledges the need for "best practice long term planning", and to "ensure coordination across all elements of the supply chain". PIAC endorses these as being critical to ensure that changes made to the energy system are in the long term interests of consumers while maximising efficient investment in the NSW energy system.

In PIAC's view, it is critical to understand that resilience is not the same as energy security or reliability, and measures to improve reliability can actually have a negative impact on resilience through their negative impact on the affordability of energy. While NSW consumers experience a generally high level of reliability, a number of factors have contributed to the NSW energy system, and the NEM more broadly, lacking in resilience in the face of changing climate.

NSW transmission and distribution systems have been built to deliver a very high level of reliability of supply to NSW consumers, largely as the result of deterministic reliability standards that were previously in place. While higher reliability contributes to higher resilience, this benefit is diminished by the considerable expense imposed on consumers, such that energy is not affordable for many, as they continue to pay for this network reliability. Consumers face further increases in their energy cost in coming years as wholesale energy costs are expected to increase substantially in coming years. A system in which many consumers cannot afford energy is not a resilient system.

More recent assessments of the Value of Customer Reliability suggest it is unlikely that additional, and continuing, expense of the above investment in reliability accurately reflects consumers' actual willingness to pay for fewer supply interruptions (or their willingness to accept a lower level of reliability in exchange for lower cost). Noting this, PIAC strongly supports the ToR's requirement that the taskforce considers the costs and benefits any recommendations.

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In particular, the lack of coordinated energy and carbon policy at a national level, along with the absence of central planning more broadly, has created an environment of uncertainty that has deterred efficient and timely investment in generation and energy infrastructure.

In terms of solutions, it is generally thought that measures to improve reliability or security of supply come at higher cost to consumers. PIAC notes however that system security and reliability can be improved through the increased use of demand management solutions that also reduce the cost to consumers. These measures are essential to maintaining stability and efficiency in an increasingly decentralised grid.

At a wholesale market level, the absence of an accessible, mature market for demand response in the NEM has left NSW consumers exposed to a greater risk of involuntary load curtailment due to the lack of available generation during maximum demand events, and potentially higher wholesale prices at other times. The recent experience in NSW on 10 February 2017 highlights the potential impacts to the electricity system from extreme weather events.

At a network level, PIAC would draw the taskforce's attention to the body of work undertaken by the Institute for Sustainable Futures to understand the benefits, and barriers to the adoption, of demand management and options for the design of a demand management incentive scheme.

In addition to participating in the Finkel review, PIAC has undertaken a thorough review of energy market governance arrangements and identified improvements across the NEM. PIAC believes there are a number of actions that could be made in the near term that will improve the resilience of the New South Wales electricity system and the NEM more broadly. PIAC would be pleased to share this work with the Taskforce by request.

Batteries at both the behind the meter and grid level can provide a number of additional services, beyond just storing energy for use to reduce peak demand, to the energy system as a whole. PIAC has undertaken its own work, and been a involved with that of other organisations, to better understand the need of an appropriate regulatory environment, considering also the consumer protection issues associated with batteries. PIAC would be pleased to share this work with the Taskforce by request. There is more work to be done to ensure that batteries and other technology solutions are effective in the grid of the future.

PIAC is concerned that governance of the Australian energy markets generally favours incumbents, at the expense of competition from emerging players, limiting opportunities for new and emerging businesses to support improved resilience. Given the transformation underway in the Australian energy markets, this review provides an opportunity to recommend changes that support innovation and avoid entrenching outdated systems and business models.

PIAC would welcome the opportunity to meet with the taskforce to discuss these issues in more depth.

Yours sincerely,

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