

Submission to AEMO

Alan Pears AM,

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I agree that this can be published.

I have not contributed significantly to AEMO consultations in the past. This reflects my view that its overall framing is flawed for several reasons:

- Its targets for carbon emission reduction fall far short of what is really needed to limit devastating impacts on the economy and society – see [We are sending the wrong message by focusing on annual carbon emissions based on 100-year global warming potential - Pearls and Irritations](#)
- The National Electricity Market Objectives are fundamentally flawed. While incorporation of climate impacts is a step forward, the ongoing use of the aim to reduce prices is fundamentally flawed. This undermines a focus on energy efficiency and other demand-side, business model and consumer ‘defensive actions’ and drives a focus on supply side solutions. We must aim to reduce overall costs and climate impacts, which involves much stronger action and reframing of policy on many aspects of energy.
- The design of the spot market has failed to drive appropriate investment. Instead, it favours incumbent gentailers and shifts risk onto consumers by increasing volatility of prices. Network regulation has also failed consumers, as regulators have failed to recover super profits beyond regulated returns on investment, and networks have focused on investment in supply side infrastructure to maximise profits. Postage stamp pricing and other factors have blocked consumer-side action.
- Modelling of demand side potential is seriously hampered by lack of adequate data and understanding of fundamentals of physics, consumer perceptions and how innovation plays out in the real world. Engagement with incumbents in both supply side and demand side instead of disrupters leads to failure to grasp the potential for change.
- The proposal that there will be heavy reliance on gas fired electricity generation, but that it will be used for limited periods, is commercially unrealistic, as well as being environmentally detrimental. It involves significant investment in generation assets that have very high risk of low returns.

The paper I co-wrote with Amandine Denis-Ryan earlier this year (see [Tasmania could cut its energy bills by prioritising household efficiency and exports to the mainland | IEEFA](#) ) provided examples of how appropriately integrated demand side and supply side solutions combined with smart export/import across state boundaries could transform outcomes.

I recently participated in a Pearcey Foundation event where most of the focus was on the complexities and challenges of top-down management of energy transition. The discussion failed to imagine how ‘bottom-up’ alternatives could avoid much of this complexity. For example, 30% of Australian households have no control over energy issues on the supply side of their PowerPoints. They need ‘behind meter’ options. We are seeing emergence of plug-in options that can transform the situation. Balcony PV in Germany, battery boosted induction cooktops in the USA, heat pump water heaters, dramatic improvements in end-use energy efficiency and demand management capabilities are shifting the balance of power to ‘behind the meter’ options. Some energy retailers are even introducing business models that reward change instead of punishing failure to change.

The energy sector, both industry and regulators, lacks trust and 'license to operate'. Governments do not respond to strong messaging from voters. Increasing numbers of consumers will act to 'defend themselves' from these forces in ways that don't fit into the 'empowered, economically rational' assumptions that underpin energy modelling and policy.

Recent roll-outs of 'smart' meters with poor communication and energy pricing models that increase perceptions of risk amplify the mistrust and tendency of consumers and their advocates to take defensive action.

The realisation that solar is not a 'silver bullet', especially in winter, has pushed AEMO and others towards a focus on gas-fired generation as the 'safe' option. It's not. The drivers of high winter electricity demand are thermally poor buildings, inefficient electric and gas appliances and limited flexibility in demand. These require 'behind the meter' action, not traditional energy supply side action.