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Four issues the Finkel blueprint should address

Grattan Institute submission to the Independent Review into the Future Security of the National Electricity Market (the 'Finkel review')

Future Security of the National Electricity Market: Submission from Tony Wood, Energy Program Director, Grattan Institute and David Blowers, Energy Fellow, Grattan institute

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Summary points

- The Finkel review will need a tight focus to deliver the blueprint that consumers and all participants in the National Electricity Market need. The blueprint should address four issues:
    1. New market rules to manage emerging security challenges and future capacity risks
    2. A plan for next summer when shortages may arise
    3. Requirements for integrating climate and energy policy
    4. The ability of the NEM to provide the right signals for new investment in the future and what alternative structures and policies may be needed.
- New rules will give the market a better chance of responding to changing system security and capacity needs – without major capital expenditure. Governance processes should be streamlined and rule changes accelerated to ensure we are prepared for next summer.
- A plan is needed for the summer of 2017-18 to address the potential for shortages in some regions. The plan should identify responses for the operator, in the absence of a market response, and specify when to use strategic reserves.
- Credible, integrated climate and energy policy is critical for investment in the electricity sector. This is an issue for the Government's 2017 Climate Change policy review. The blueprint should not attempt to design climate change policy but instead identify requirements for maintaining reliability under different potential climate change policies, with a clear focus on integration with the NEM.
- The Finkel review should consider alternative market structures and policies that might help to manage two of the big reliability uncertainties facing the NEM: investment uncertainty and the increasing penetration of intermittent generation.
- Despite the pressure to act, it is important we don't rush into expensive solutions or an overly-planned approach. Improving demand response, making use of strategic reserves, and diversifying system security services provide cheaper alternatives to manage reliability of electricity supply.
- We do not yet have all the solutions we will need in future. Maintaining flexibility through the transition is critical to ensure we can take advantage of better solutions as they emerge
- To maintain flexibility, we need a technology-neutral approach to meeting reliability needs and emissions reduction targets at least-cost. 'Picking winners' could lock-in high-costs and high-emissions for many years to come.
- Short, medium and long-term actions are identified in this submission and the attached working paper.

Introduction

This submission responds to the Independent Review into the Future Security of the National Electricity Market, preliminary report (known as the 'Finkel review').

The review is timely given recent events in the National Electricity Market (NEM), in particular the state-wide blackout in South Australia in September 2016.

Grattan Institute is an independent think-tank focused on Australian domestic public policy. We aim to improve policy outcomes by engaging with both decision-makers and the community. Our interest in the Finkel review and the focus of this submission is therefore primarily in how domestic policy affects the reliability and security of the NEM, and in protecting the interests of the consumer.

We understand that the Finkel review is seeking input on the overall blueprint and answers to specific questions raised. This submission addresses the overall focus of the review as well as specific questions raised where we have supportable views or recommendations.

A working paper attached to this submission reviews capacity risks and security issues in the NEM in more detail and recommends specific areas for action.

Focus of the blueprint

The Finkel review will need a tight focus to deliver the blueprint that consumers in the NEM need. The preliminary report identifies seven key themes and poses more than 50 questions for input. While there is no doubt that these are all important issues, the review is trying to do too much.

Reliability and security concerns were the trigger for the review. Market design and governance to support reliability and security of electricity supply should be the focus.[1] Other issues identified in the preliminary report may inform responses – for example, affordability and emissions reduction goals should be considered in weighing up potential solutions to reliability and security issues.

We recommend the Finkel review takes a narrower focus in order to properly address reliability and security concerns.

The core of the Finkel blueprint should focus on two issues that need addressing in the short term:

1. New market rules to manage emerging security challenges and future capacity risks
2. A plan for the summer of 2017-18 when shortages may arise in some regions

And two issues that need resolving to ensure the medium- and long-term reliability of our electricity system.

3. Requirements for integrating climate change and energy policy while maintaining reliability of supply
4. The ability of the NEM to provide the right signals for new investment in the future and what alternative structures and policies may be needed.

A Finkel review that delivers on these four issues would be an energy policy blueprint that could attract support across political lines. Bipartisan federal support with state government alignment is critically important to long credibility and investment.

[1] This focus is most closely reflected by Themes 5 and 7 identified in the preliminary report: *Market design can support security and reliability* and *Energy market governance is critical*. Preliminary report, p.4.

1 New market rules

Increased levels of intermittent generation along with the withdrawal of capacity from the market have increased risks to system security and reliability. The extent of current challenges to the security and reliability of the NEM are discussed in chapters 2 and 3 of the attached working paper.

New market rules are needed to manage emerging security challenges and future capacity risks in the NEM. Recent events point to the need to diversify options for managing system security and improve governance of the NEM.

New market rules should include:

- New markets for ancillary services to give the market operator more flexibility in responding to increasing and changing system security needs
- A range of demand-response mechanisms to enable the operator to better manage sudden changes in supply and demand
- Align dispatch and settlement periods to reward flexible generation and fast-response
- Clear up rules for accessing mothballed generation capacity and when to use mechanisms to procure strategic reserves
- More conservatively account for risks of extreme weather, variable generation, and demand coming on and off the grid through the day in forecasting processes and models

These are 'no regrets' moves that will give the market a better chance of responding to changing needs – without the need for major capital expenditure.

Rule changes in the past have often taken many years. Governance processes will need to be streamlined and rule changes accelerated to ensure we are prepared for next summer. To speed up market improvements, new rules and programs could be piloted for a period prior to a formal rule change.

As the Productivity Commission noted in 2013, governance arrangements in the NEM are highly complex and *"are neither efficient nor effective in achieving good outcomes for consumers"*.[2] Our governance institutions need better insight into consumer preferences, including the value placed on reliability, affordability and sustainability of electricity supply.

More demand-side participation in the market would help to better understand what households and businesses want and respond to changing needs over time. Consumers need clearer price signals (and better product differentiation) to be able to demonstrate their preferences. The Finkel blueprint must deliver for consumers – they are already seeing higher prices and supply

[2] http://www.pc.gov.au/inquiries/completed/electricity/report/electricity-overview.pdf

interruptions and are the most important stakeholders in this review.

2 A plan for the summer of 2017-18

Hot summer days are the times of maximum electricity use in most states and pose the greatest predictable risk for reliability of electricity supply. Potential shortages are forecast for Victoria and South Australia next summer, while New South Wales system was put under extreme pressure during February 2017.[3]

We need an agreed plan before next summer and the blueprint should deliver this. It takes time to build new capacity but we can manage in the interim. There are several short-term responses available to either the market or the operator to manage risks of shortage. If the market fails to respond to the potential for shortages next summer, then the operator has the power to contract for emergency reserves.

The Reliability and Emergency Reserve Trader (RERT) mechanism can be used to bring back mothballed capacity or purchase demand-response to cover any risk of a shortage. The operator has procured emergency reserves on three occasions in the past, but reserves were never actually dispatched.[4]

The plan for addressing potential shortages in New South Wales, Victoria and South Australia next summer should ensure we make best use of existing generation capacity, including plants that are currently mothballed, as well as demand-response options.

The rule changes proposed above will likely help to manage risks, alongside the RERT if need be. The rule change process should be accelerated to ensure we are prepared for next summer.

[3] As at November 2016, when the closure of Hazelwood was announced. See AEMO (2016), *Energy Adequacy Assessment Projection,* November.

[4] In 2005 a total of 84MW of reserve capacity was contracted for the period 31 January to 4 March (33 days) at a cost of $1m; in 2006, a total of 375MW for the period 16 January to 10 March (54 days) at a cost of $4.4m; and in 2014, 650MW for the period 15-17 January (3 days). In each case, reserve capacity was purchased for Victoria and South Australia, but it did not need to be dispatched.

3 Integrating climate and energy policy

The Finkel review should emphasise the need for climate change policy that is credible and that integrates with the NEM.

The blueprint should not attempt to design climate change policy. This is the role of the 2017 review of Australia's climate change policies. Instead, it should identify requirements for maintaining reliability and security of supply in the NEM under different potential climate change policies.

The electricity sector requires clear emissions reduction targets and expected milestones over time. The 2017 review of Australia's climate change policies should identify the electricity sector's contribution to Australia's overall emissions reduction targets (over time), and the mechanism/s by which emissions reduction will be achieved.[5]

The mechanism should integrate with the NEM – a priority endorsed by the COAG Energy Council. A carbon pricing mechanism (such as through a cap-and-trade or emissions intensity scheme) will have the least distortionary effects on the market. But other mechanisms may also be on the table. The Finkel review should identify risks to reliability and security of energy supply associated with different potential emissions reduction mechanisms.

In 2016 Grattan Institute published a report demonstrating that an Emissions Intensity Scheme (EIS) would integrate well with the NEM and could be a practical step on a pathway from the current policy mess towards a credible energy policy.[6] But an EIS is not the only option. With a clear emissions reduction target for the NEM, there are several different mechanisms that could achieve it.

Which mechanism (and its associated costs) is a question for the 2017 review of climate change policy. The Finkel review should focus on how different mechanisms could be integrated with the NEM and how they would affect reliability of supply.

It could also identify mechanisms that are more problematic in failing to integrate with the NEM such as the RET and state renewable procurement programs.

[5] http://www.environment.gov.au/climate-change/review-climate-change-policies

[6] *Climate phoenix*: https://grattan.edu.au/report/climate-phoenix-a-sustainable-australian-climate-policy/

4 Alternative/complementary market structures and policies

There may be structures and policies that could more explicitly value reliability of supply in the NEM, alongside affordability and emissions reduction. The Finkel review should analyse and identify any alternative or complementary market structures and policies that might better meet this need.

The proportion of intermittent supply seems likely to increase to ensure our emissions reduction targets are met. The market will need to provide the lowest-cost mix of generation, storage and demand response that accommodates intermittent supply without threatening supply security. The NEM may need new policies or structures to ensure that reliability of supply is explicitly valued and rewarded.

The Finkel review should consider alternative market structures and policies that might help to manage two of the big reliability uncertainties facing the NEM:

1. What will happen to investment in generation capacity if climate policy is not resolved in the near term?
   - What are the best alternative models for the NEM that would sure up capacity while allowing for climate policy flexibility?
2. How will the NEM cope with high levels of intermittent generation?
   - What are the options for meeting supply/capacity shortfalls if the market does not respond on its own?[7]

Any new policies or structures should be technology-agnostic and maintain flexibility. A technology-neutral approach enables new solutions to emerge beyond those we can see now. Maintaining flexibility through the transition will ensure we can take advantage of them.

Despite the pressure to act, it is important we do not rush into expensive solutions or an overly-planned approach. There are many uncertainties ahead.[8] Expensive solutions such as interconnectors and capacity markets are risky for affordability given uncertainty about future demand and the kinds of capacity we might need.

We do not yet have the technology mix we will need in future. Recent events suggest that more flexible capacity would help – capacity that can ramp-up and respond quickly, including demand-response. Reliable renewable generation and/or storage will be required sooner or later if the electricity market is to one day get to net-zero emissions. It is important that we do not 'lock-

[7] Options could include policies that procure non-intermittent generation or storage options, the building of new transmission and demand response.
[8] For example, it is unclear what the future generation mix will be, how much intermittent generation will be in the market, which new technologies will rise and when, what commercial investment decisions will be made and whether demand will continue to decline with consumers going off-grid or increase with the electrification of other industries, particularly transport.

in' the current suite of technologies at the expense of better solutions that may emerge in future.

To enable a technology-neutral approach, we must clearly define our needs for reliability and emissions reduction. In a competitive market, the least-cost solutions that meet these needs can then rise and change over time.

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