

March 2018

Don't lose an opportunity for integrating energy and climate change policy

Response to the Energy Security Board's Consultation Paper on the National Energy Guarantee

Submission from Tony Wood, Energy Program Director, David Blowers, Energy Fellow, and Kate Griffiths, Senior Associate, Grattan Institute

Primary Contact:

Name: Tony Wood

Title: Program Director, Energy

Organisation: Grattan Institute

Email: tony.wood@grattan.edu.au

Mobile: +61 419 642 098

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Summary

- The process and structure of the Energy Security Board (ESB)'s approach to the National Energy Guarantee remain sound and offer the potential to deliver the integrated approach to energy and climate policy that is needed.
- The emissions requirement of the Guarantee is neither pro-coal nor anti-renewables. Any weakness in the target arises from the political choice of the Commonwealth Government. The design of the Guarantee is flexible to alternative choices. The associated trajectory should be set on a rolling three-year basis to provide some certainty to industry and to allow for future changes in both the end target and demand forecasts.
- The design of the emissions requirement is complicated by the need to avoid tradable certificates and the ESB should consult further with participants to ensure the integrity of the calculations that follow. The compliance regime should enable retailers to engage in commercial transactions to optimise individual positions and reduce costs overall.
- The Government has imposed exclusion of emissions intensive trade exposed (EITE) entities from the emissions requirement but not from the reliability requirement. This exclusion should be revisited if only because modelling of the Guarantee indicates it will drive lower, not the higher prices that the exclusion is presumably aimed to address.
- The design options for the reliability requirement are set out comprehensively and critical issues identified. Yet, the paper seems unclear as to whether the reliability requirement is addressing investment, deployment, or both, and what the role of the Australian Energy Market Operator should be. The ESB must address these questions before a credible design can emerge.
- Other deployment mechanisms are being investigated (strategic reserves and a day-ahead market). These decisions will complement the Guarantee, although decisions that create out-of-market transactions should be avoided or minimised. The Guarantee should provide a long-term signal to encourage investment and ex-post compliance to strengthen the incentive to deploy during critical periods.
- Broadening the base of liability to include industrial and commercial consumers is a concept worth further consideration as it may reduce their overall costs.
- Concerns have been raised that the Guarantee could have adverse consequences for competition. Concerns about reduced competition have already emerged separately. The ESB should clearly identify these concerns and link with the ACCC to consider how they might be addressed.
- Significant consequences for addressing climate change, maintaining reliability and doing so at lowest cost will flow from the choices on several key design options adopted by the ESB. It will be critical that these consequences and the associated trade-offs are made clear to the COAG Energy Council so that it can make fully-informed decisions.

1 The emissions requirement

1.1 Emissions reduction target and trajectory

The 2030 emissions reduction target is a decision of the Commonwealth Government. Although no targets have been set beyond 2030, the COAG Energy Council has endorsed¹ the recommendation of the Finkel Review that, by 2020, the Australian Government should develop a whole-of-economy emissions reduction strategy for 2050.² This strategy will not change the design of the Guarantee, but will provide context for the way in which targets and trajectories should be envisaged over a longer period.

The current 2030 target is likely to change because:

- Current commitments under the Paris Accord are not sufficient to meet the overarching objective of limiting global warming to under 2 degrees Celsius. When the targets are next discussed in 2020, Australia – and most other countries – are likely to have to increase their 2030 targets.
- The Labor Party has committed to a 45 per cent reduction target in 2030. Any change of government is likely to see a change in the target.

- It is difficult to see Australia meeting even a 26-28 per cent target by 2030, if the electricity sector only provides a 26 per cent reduction. Cutting emissions in other sectors is far more complex and expensive. If the economy-wide target is to be met at least cost, the electricity sector will have to contribute more.

The mechanism for setting the sector-wide target and its trajectory will need to be flexible enough to deal with this likelihood.

The consultation paper indicates that a trajectory – expressed in emissions per MWh – could be set for a period of five years, to provide certainty to industry. While a period of certainty represents good practice, a five-year lock-in may be too long given that both the end target and demand forecasts are likely to change (and could change significantly).

If a decision were made in 2021 to adopt a higher target of 45 per cent for the electricity industry, the sector would still be subject to a 26 per cent trajectory until 2025. Consequently, the trajectory between 2025 and 2030 would need to be much steeper.³ A steeper trajectory is likely to increase the cost of emissions reductions and may even make the target unachievable.

¹ <http://www.environment.gov.au/system/files/resources/18690271-59ac-43c8-ae1-92d930141f54/files/2017-review-of-climate-change-policies.pdf>

² <https://www.energy.gov.au/sites/g/files/net3411f/independent-review-future-nem-blueprint-for-the-future-2017.pdf>

³ Following a 26 per cent trajectory for five years under a 2030 target of 45 per cent would deliver a shortfall in emissions reductions between 2020 and 2025. This shortfall would have to be made up after 2025.

An additional complication arises if the trajectory is expressed in emissions per MWh with a five-year lock-in. Electricity demand can vary significantly from forecasts as was seen in the past decade. Getting demand forecasts wrong could mean substantial changes to the trajectory for following periods or even missing the target.⁴

The RET target ran into issues when it failed to adjust to changes in demand. One of the benefits of using emissions intensity is that it can adjust for demand. But locking it in five years ahead of time limits its ability to do so.

We propose:

- The Commonwealth Government sets the 2030 target and a fixed 3-year trajectory for emissions from the electricity sector. The emissions trajectory should identify the total amount of emissions the electricity sector can produce each year, on a rolling 3-year basis. The emissions trajectory should directly link to the carbon budget required to meet the 2030 target.
- The emissions intensity obligation for retailers should be set one year in advance, allowing targets to be updated using the latest AEMO demand forecasts. Retailers should have sufficient information regarding total emissions and forecast demand to be able to predict their obligation in future years, before it is locked-in.

⁴ For example, under a five-year lock-in, the emissions intensity requirement for retailers in 2030 would need to be set by the end of 2025. Any increase in

- We also strongly support the use of carryover and deferment in the process. With these mechanisms in place, retailers will not be unduly disadvantaged by either under- or over-estimating their liability.

1.2 Compliance

The methodology for emissions calculation for liable retailers is made more complex by the need to avoid creating and trading emissions reduction certificates. Market contracts currently available do not necessarily account for the emissions intensity of the generation source, where one is specified. The emissions calculation will inevitably include some proxies which may, or may not, accurately reflect the emissions intensity of the generation involved.

The ESB should undertake more detailed assessment of participant behaviour prior to reaching a conclusion on how best to calculate a retailer's liability. It is not clear whether existing contracts between retailers and generators can be used to assess compliance with the emissions guarantee. Scrutiny of existing contracts would give the ESB a better understanding of their potential. Whatever the outcome of this assessment, the final form of compliance should allow and support retailers engaging in commercial transactions to optimize their financial positions and reduce the overall cost of the requirement.

The certification of emissions or emissions intensity would make it easier for retailers to comply with the guarantee and for

demand above forecast between 2025 and 2030 would leave the sector at risk of missing its target.

compliance to be checked. If information from contracts does not suffice, certification may be the only way to accurately monitor and evaluate compliance with the emissions guarantee.

1.3 EITE exemption

Blanket exclusion of EITE businesses as a principle remains inferior to imposing a carbon leakage test on individual sub-sectors of businesses.⁵

Further, it is no longer clear that there is a benefit to EITE businesses being excluded. Modelling produced by the ESB indicates that prices will reduce under the National Energy Guarantee. If this is true, it is not clear why EITE businesses would need to be exempt from the emissions guarantee.

⁵ See <https://grattan.edu.au/report/climate-phoenix-a-sustainable-australian-climate-policy/> and <https://grattan.edu.au/report/new-protectionism-under-carbon-pricing/>.

2 Reliability requirement

2.1 Is the central problem investment or deployment, or both?

The consultation paper specifically states that “*the incentive to invest in dispatchable resources is created by the reliability requirement*”. Yet much of the paper is concerned with securing and deploying existing assets, including demand response. The question therefore arises: is the central problem investment or deployment, or both?

If the reliability obligation is primarily concerned with deployment, then it is not clear why other deployment mechanisms such as strategic reserves and a day-ahead market are also being investigated. As the consultation paper makes clear, these decisions will be made separately to the design of the Guarantee.

In our view, the reliability obligation should provide an additional incentive for investment and compliance with the obligation should hinge on successful deployment when needed. There are already mechanisms available, such as the RERT, that can deal with emergency deployment.

One of the reasons the objective of the reliability obligation is unclear is that the consultation paper canvasses a range of possible ‘trigger points’, from three months to five years out.

Until the reliability obligation is triggered, there is no additional incentive for investment or deployment in the NEM than currently exists. A short-term trigger provides additional incentive for deployment but little opportunity for new investment. Three months out, the market must make do with whatever has already been built and some additional demand response. (Conceivably diesel generators could be deployed at this short notice, but not much else). A long-term trigger of three years or more could reasonably send signals for investment in new generation.⁶

Deciding whether the reliability obligation is meant to resolve an investment problem, deployment problem, or both, determines the trigger point.

The cost implications of the trigger point are mixed: a short-term trigger point allows for better information to come to light that may mean the obligation does not need to be triggered at all. But it also limits the options available if triggered, which could lead to costly ‘emergency’ solutions.⁷ A long-term trigger point gives retailers a range of investment options.

Alternatively, there is no need to specify the trigger point if it is an ongoing annual requirement. Retailers would know they need to meet the obligation every year, so this would provide a signal for investment.⁸

⁶ A reliability obligation with a long-term trigger can provide incentives for both investment and deployment if compliance is well-designed.

⁷ Although retailers may be able to pre-empt the likelihood of the requirement being triggered, by investing earlier.

⁸ The penalty for failing to meet the obligation would need to be set several years in advance to provide the incentive to invest.

We propose:

- A long-term signal to encourage investment – either a trigger point three to five years out or an annual obligation with no trigger required; and
- An ex-post compliance date to provide a strong incentive to deploy during critical periods (as nominated by AEMO).

The consultation paper canvasses two approaches to compliance: ex ante and ex post. The paper acknowledges that ex ante compliance is heavily reliant on forecasts and differences between AEMO and retailer data could be contentious. The ex post approach resolves most of these complexities because it only requires actual data and is assessed after a critical period.

The key concern identified with the ex post approach is that it could result in a situation where a reliability incident occurs because retailers fail to meet their obligation. This risk can be addressed in two ways. First, the penalty applied if retailers fail to meet their obligation should be equivalent to the value of lost load. Second, AEMO could use the existing RERT if a shortfall is expected.

AEMO can retain its role as ‘procurer of last resort’ under an ex-post approach. If it looks unlikely that retailers will meet their obligation, despite the penalty, then AEMO could use the existing RERT to procure additional generation and/or demand response.⁹ The retailer obligation would be assessed ex-post, *as if AEMO had not acted*. If there would have been a shortfall (had AEMO

⁹ This process would need to be clearly prescribed in advance.

not acted), then those retailers that did not meet their obligation would pay the full penalty (potentially covering the full cost of using the RERT).

Our report, *Next generation*, sets out our position on an investment mechanism for the NEM. Reaching a firm view on the purpose of the reliability obligation is the key to resolving the major design issues.

2.2 The role of a central agency

The paper rightly sets out the tension around the role of the central agency, including procurement and how existing mechanisms such as the RERT, and potential new mechanisms, such as a strategic reserve and day-ahead market might be considered.

The rationale for greater central control rests on three points:

- The need of policy makers to have certainty;
- The extent to which central planning and/or procurement can deliver least-cost options; and
- The extent to which central planning and/or procurement can reduce market power (i.e. while central control might lead to higher costs, this is potentially mitigated by reducing financial transfers from consumers to producers).

The consultation paper states that the market is:

*“more likely to be in the long-term interests of consumers because investors and their counter parties are likely to be better informed, better incentivized and better able to manage these risks than centralised authorities”.*¹⁰

Yet the consultation paper also proposes an AEMO book build, which seems like a shift to a strongly centrally managed approach.

We recommend a market-based approach but note that an ex post retailer obligation does not rule out intervention by AEMO if required.

Risk allocation and the pricing of risk should be more directly recognised as central to balancing reliability and cost, with the potential for over or undervaluing VOLL requiring clear assessment.

The ESB should provide the COAG Energy Council with a preferred direction, the reasons for their choice, an assessment of the risks and recommendations for how such risks should be managed.

¹⁰ Appendix C.

3 Other issues

3.1 Competitive markets

The consultation paper argues that the Guarantee will increase liquidity in contract markets and lead to a fall in the wholesale spot price. However, it also acknowledges concern that the Guarantee could exacerbate existing market power issues and create a barrier to entry for smaller players.

The ACCC raised concerns about market concentration in power generation in its review of retail competition. Their concerns are mainly around ownership concentration because of the recent departure of some large generators.

Another concern is that more zero-marginal-cost generation is likely to lead to a greater reliance on contracts for revenue to underpin investment and this may disadvantage smaller retailers. These two issues arise regardless of the Guarantee.

However, a key concern specific to the Guarantee, is whether additional obligations on retailers are easier for larger retailers to meet and therefore act as a barrier to smaller retailers. Market participants have previously suggested that the RET, which is also an obligation on retailers, increased the market power of the three biggest integrated generator-retailers.

These concerns lead us to three recommendations:

- The ESB should look to submissions to clearly define the nature of the competition problem, recognizing that all participants will have their own vested interests.
- The ESB should link this work directly with the ACCC's review of retail competition.
- Depending on the results of the above, the ESB and the ACCC should consider actions such as those we suggested in our recent paper, *Designing a more reliable national electricity market*.¹¹

3.2 Role of state-based schemes

State and territory governments can and do legislate to impose targets for renewable energy in various ways. These targets are industry policies, rather than emissions policies, in that they are intended to increase renewable energy, and in some cases, more investment and jobs in the jurisdiction.

But these targets have also been used by states to attempt to drive emissions reductions in the absence of a credible Commonwealth scheme. While the Guarantee does not prevent states from introducing these targets, it is hard to see how state-

¹¹ <https://grattan.edu.au/news/designing-a-more-reliable-national-electricity-market/> <https://grattan.edu.au/news/designing-a-more-reliable-national-electricity-market/>

based targets can be additional to the emissions requirement under the Guarantee.

Some states may choose to drive larger emissions reductions than others. But this will not change the overall national emissions reduction target, meaning that states with low or no renewable energy targets may offset the emissions reductions of those with higher renewable energy targets.

3.3 External offsets

We have consistently argued that domestic and international offsets are a perfectly sensible way to reduce the cost of reducing emissions globally, as long as rigorous integrity tests are applied to ensure they do not compromise environmental objectives. It is then left to the liable entities, i.e., the retailers, to choose between the alternatives. In doing so, they will consider the falling cost of low-emissions technologies and the forward price of offsets.

There is no policy design principle for setting some arbitrary limit on such offsets. However, concerns about internationally imposed constraints or as a way of discounting less robust offsets may justify the Government's setting such a limit.

For any queries, please contact:

Tony Wood

Program Director, Energy

Grattan Institute

Tony.wood@grattan.edu.au

Mobile: 0419 642 098