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The Finkel exposition

SECURITY AND STABILITY

The security initiatives proposed by Finkel address technical and regulatory issues, and centre on some seemingly obvious measures to ensure that there is actually an acceptable level of security and stability in each section of the NEM – something, as it turns out, that is not particularly well managed at the moment. Indeed, a recurring theme in the Review is that the system is flying blind due to a lack of transparency.

The Australian Energy Market Operator (AEMO) doesn't actually have visibility of the controls under which generators disconnect from the grid due to network faults. This issue was responsible for the "surprise" disconnection of wind generators during the South Australian blackout – AEMO had no idea where the fault settings on the generators were set, and so could not predict the possibility that the system would collapse in that

The Finkel Review has been one of politics' most anticipated documents in recent memory. Energy expert Paul Bannister, M.AIRAH runs his finely calibrated ruler over it.

At more than 200 pages and 50 recommendations, *the Independent Review into the Future Security of the National Electricity Market* by Dr Alan Finkel (aka "the Finkel Review") makes it overwhelmingly obvious that the National Electricity Market (NEM) has some big challenges, if not major dysfunctions. And overall, the review does a good job of identifying pragmatic solutions to these problems while charting a careful course between some of the acute political sensitivities of the sector.

In short, the Review identifies:

- That new mechanisms are required to improve security and stability in the market, including requirements for renewable generators to contract for supply back-up in areas where the

proportion of renewable energy is large enough to post risks to security;

- A Clean Energy Target, which rewards generators below a given emissions threshold in a manner similar to the operation of the existing renewable energy target, and thereby encourages a reduction in the emission intensity of new generation;
- The introduction of a new Energy Security Board into the governance of the NEM to take control of the implementation of the proposed reform agenda.

There's a mass of detail under this, but most of this can be considered within the framework of these three initiatives. So it's worth looking at these three items in more detail.

“ A recurring theme in the Review is that the system is flying blind due to a lack of transparency ”



Dr Alan Finkel

particular way. (Equally disturbing is the fact that the two “Black start” systems – designed to reboot the grid from a blackout – both failed).

AEMO also can’t see how much fuel the gas generators have available. This again has contributed to recent failures, with gas generators unable to operate because they don’t have accessible fuel.

As a result, the Review makes many sensible suggestions for improved transparency of information so that AEMO has some chance of actually being able to manage the system. Indeed, so sensible that it is a little worrying from the perspective that it has taken an external review – and several system failures – to bring these issues to light.

In a recommendation that has attracted some ire, the Review recommends that new generators be required to provide a “Generator Reliability Obligation”, essentially ensuring that each incremental new generator does not take the local grid beyond acceptable levels of reliability. This in effect creates a requirement for new renewable generators either to contract back-up generation services from existing conventional generators or supply their own back in the form of synchronous generation or battery storage.

This of course increases the cost of connection for these new renewable generators, which depending on your outlook means that these have not historically reflected their true cost, or is an unfair impost on low-emissions generators.

In reality, the Review is subtler than this: the proposed provision only applies to new generators in areas where reliability is already stretched. For a certain amount of renewable generation in the grid, there is no need for such additional security, but as the proportion rises it becomes important. As with much of the Review, the proposed approach is pragmatic and reasonably even-handed, meaning of course it makes everyone a bit unhappy.

This pragmatism does come a little unstuck when it comes to looking outside the current paradigm to new-economy solutions such as distributed demand reduction and alternative fast-frequency response mechanisms – i.e., ways in which consumers can participate in the support of network stability, rather than leaving it all to the generators to resolve among themselves.

Though these issues get a good airing in the Report, the recommendations in this area are at best tentative and appear to adopt a “wait-and-see” approach rather than advocating a more proactive stance. The lack of examination of the comparative economics of demand-side versus supply-side responses to energy security issues is disappointing in this respect, too.

CLEAN ENERGY TARGET

Possibly the most reported aspect of the Review is the advocacy of a Clean Energy Target (CET) mechanism whereby generators with emissions below a benchmark are provided with financial

‘ Roof-top solar, batteries, electric vehicles and demand-side response will change the market beyond recognition ’



Rooftop solar will help change the market beyond recognition.

benefits. This mechanism, which is very similar to the current Renewable Energy Target but expanded to include a range of lower-emissions technologies all the way through to (possibly) the lowest-emission coal technologies, is advanced by the Review once again as a pragmatic solution to a challenging and indeed fraught political issue. And once again the degree to which both the environmentally concerned and the coal industry supporters have indicated their dissatisfaction is an indication of the delicate nature of the compromises involved.

Inevitably, much of the discussion around the CET has misinterpreted or misrepresented the Review.

Firstly, the Review pointedly indicates that the CET and EIS are fairly much interchangeable, and that the selection between these is primarily a political decision. Secondly, while the Review bases its forward scenarios on a 26–28 per cent reduction on electricity sector emissions by 2030 (which is almost certainly too conservative a target) it specifically recommends that the actual trajectory is set by the federal and state governments. The numbers being bandied around for the thresholds (variously 0.6–0.9kg/kWh) are not discussed anywhere in the Review.

I am on record as saying that the CET is too open to political interference, and this reflects the gritty reality that the threshold and the trajectory of that threshold will be a political football for as long as it exists. That said, the Review’s conceptualisation of an Emissions Intensity Scheme is similarly open to

political interference because it is also modelled around an externally provided trajectory rather than revolving around a more absolute number such as the market average.

It is hard to escape the reality that, given that government has agreed to the Paris accord, it has a responsibility to manage the transition, and thus should be setting the trajectory. The challenge, of course, is the past decade has clearly demonstrated the profound inability of the government to do its job. The risk with the CET, therefore, is that it depends on political will and preferably bipartisanship, both of which are vanishingly scarce. This, however, isn’t a criticism of the Review, which has no ability to enforce anything without it passing through the political process.

GOVERNANCE

Given the litany of problems and failures identified in the report, it is no surprise that the Review calls for revisions to the governance of the NEM. Central to the Review’s recommendation is the creation of an Energy Security Board, sitting between the political supervision (COAG Energy Council) and the market bodies (AEMO, The Australian Energy Market Commission (AEMC) and the Australian Energy Regulator (AER), with oversight for security and the implementation of the Review recommendations.

Although the Review avoids casting any blame, it is clear from the recommendation that the current bodies have failed to manage the electricity market effectively. The placement of the proposed Energy Security Board between

the COAG Energy Council and AEMO/AEMC/AER seems to suggest that the Review considers the major failing to be with the COAG Energy Council. This is not a great surprise given the closeness of the COAG Energy Council to the fraught political edge of the problem.

However, it is perhaps disappointing to see little appetite in the Review for reform of AEMO and AEMC, both of which clearly have a significant responsibility for the state of the electricity market.

At the beginning of the Review, it is noted that the NEM has changed rapidly since its inception from being a very stable (but dirty) mix of gas and coal in a permanently expanding market to a far more diverse mix, with significant renewable generation and a declining fleet of aging coal generators, in a market in which demand has declined and/or stabilised. Furthermore, the ability to generate and manage the data needed to understand the operation of the NEM has improved exponentially, leading to completely new possibilities in demand/supply-side integration.

So why, then, does AEMO only have board representation from generators and retailers? This was a reasonable proposition when the NEM was formed but is surely a barrier to progress in 2017 when distributors and users all have the potential to play active roles in market operation. ■

ABOUT THE AUTHOR

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