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Monday, 18 May 2020

Dr Kerry Schott AO
Chair
Energy Security Board

Dear Dr Schott,

RE: Two-sided markets consultation paper

ERM Power Retail Pty Ltd (ERM Power) welcomes the opportunity to respond to the Energy Security Board's (ESB) consultation paper on moving to a two-sided market.

About ERM Power

ERM Power (ERM) is a subsidiary of Shell Energy Australia Pty Ltd (Shell Energy). ERM is one of Australia's leading commercial and industrial electricity retailers, providing large businesses with end to end energy management, from electricity retailing to integrated solutions that improve energy productivity. Market-leading customer satisfaction has fuelled ERM Power's growth, and today the Company is the second largest electricity provider to commercial businesses and industrials in Australia by load[1]. ERM also operates 662 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland, supporting the industry's transition to renewables.

http://www.ermpower.com.au
https://www.shell.com.au/business-customers/shell-energy-australia.html

General comments

Given the focus on developing a two-sided market as part of the post-2025 review of the National Electricity Market (NEM), ERM Power appreciates the release of this consultation paper in order to facilitate discussion on the topic. The consultation paper presents a range of potential options for a two-sided market which are worth exploring in greater detail. ERM Power's comments on the consultation paper can be summarised as follows:

- No strong case has been made to shift away from the current market structure.
- Opportunities exist now that could be implemented without the need for a two-sided market.
    - DER can be dealt with via a dedicated process (i.e. through distribution network service providers) rather than put obligations on the entire market.
    - Cost-reflective pricing could be implemented now if the political will was there.
- Inefficiently centralising risk within retailers and creating more regulatory burden would be a barrier to entry.
- There are lessons to be learned from recent energy policy experiences which should be considered, including the AEMC's decision that requiring loads to be scheduled would not meet the National Electricity Objective (NEO).

[1] Based on ERM Power analysis of latest published information.

- Of the options presented, a voluntary market is likely to be the option that creates benefits, through incentivising load to become scheduled.

The case for change

ERM Power supports open and transparent markets. The NEM in general has a strong pedigree of transparency and openness and while improvements can always be made, it is important to critically assess the need for any change, the problems to be solved and the costs and benefits that would arise as a result.

Ultimately, we do not see that a case for change has been justified. While we agree that technologies are now available which might improve efficiencies, we consider that there are other means to achieve the same outcome without shifting away from the existing market structure. The paper points to the fact that when the NEM was designed it was envisaged that it would share the same characteristics of other commodity markets and that there are changes underway in the current market as generation decentralises and consumer preferences change. These are not problems as such, but rather a background to a complex market design issue. The discussion paper also points to needing to manage the security and reliability of the NEM as another justification for two-sided markets, but there is no analysis of exactly how a two-sided market would do this.

It is crucial that a clear problem or market failure is identified to justify a major change to existing market design arrangements. Without a defined problem, it is all but impossible to determine whether any of the proposed options will achieve what they aim to.

As is clear from the discussion paper, there are a range of potential two-sided market designs which would involve a wide range of costs and benefits. We consider that it would be prudent for the ESB to provide indications of the estimated costs and benefits of pursuing different approaches. It would be troubling to choose a pathway without fully understanding whether there would be a net benefit to consumers, or whether it would simply increase electricity costs.

Assessment framework

The consultation paper provides high-level details on the assessment framework which will be used to assess the merits of the design options. We support the use of a framework and consider that the ESB should also consider how the assessment framework promotes the NEO. We would expect to see more detail on the framework and how the ESB will weigh the criteria.

ERM Power also considers that there are lessons to be learned from recent energy policy experiences to inform this discussion, particularly as it relates to the potential costs and the possible benefits. We can draw parallels with the smart meter rollout in Victoria, where many of the benefits have not been achieved.[2] The Victorian Auditor-General Report on the rollout found that many of the benefits required consumer action to take advantage of the services, yet very few had chosen to do so. We see no evidence that anything has changed since this report was released.

While the Victorian experience focusses on small customers, the Australian Energy Market Commission (AEMC) has examined the prospect of very large customers participating in central dispatch as scheduled load. In 2017, the AEMC investigated the potential for price-responsive load greater than 30MW to be required to bid into the NEM as part of the non-scheduled generation and load in central dispatch rule change. This would have affected 36 loads across the NEM representing around 18 per cent of average total load.

The AEMC resolved not to make the rule change for a number for reasons, many of which are relevant to the two-sided market discussion. The AEMC found that for loads whose primary business is not related to electricity (though it is a critical input) “the costs and requirements of scheduling would represent a significant impost”.

[2] Victorian Auditor-General’s Office (2015), Realising the Benefits of Smart Meters.

Further, it found that the costs of becoming a scheduled load, relating to establishing and operating communication and telemetry systems for bidding into the market and receiving dispatch instructions, could be material. Ultimately, it determined that requiring loads to be scheduled would not meet the National Electricity Objective.[3]

It is therefore hard to see that three years later, the costs have declined enough, or the potential benefits have grown enough to justify making this change, not just for these 36 loads but for potentially all load across the NEM, or just all large customers across the NEM.

Based on all of this, we are concerned that some of the proposed two-sided market designs will in fact increase costs for consumers. Chiefly this is due to inefficiently centralising risk within retailers rather than more efficiently distributing risk across the market, but also from the perspective of imposing greater obligations on many or all consumers, retailers and third parties for something from which a small minority of consumers will benefit. In our experience as a retailer, while some consumers wish to actively engage with the market to take advantage of high and low prices, the vast majority wish to be passive – consuming when they want to with no consideration of the dynamic cost of electricity. This is not a bad thing. At present the market supports passive consumers, while innovative models are rolling out into the market to provide new services for the small number of customers who wish to engage actively. The ESB's model would essentially seek to turn this on its head – design a market tailored to a minority of consumers, with costs being imposed on all consumers.

The only approach that we believe will truly deliver benefits to consumers is the voluntary two-sided market, a model which the NEM is effectively moving towards through the introduction of the Wholesale Demand Response Mechanism (WDRM). Under the WDRM, large users will be able to bid into the wholesale market to reduce their usage and receive the wholesale spot price for a projected volume of energy they did not consume.

Finally, several of the opportunities that the ESB suggests could arise as a result of a two-sided market could be implemented now without needing to change market design at all. Chiefly, this relates to network pricing and how consumers are charged for electricity.

We also question the assertion on page 4 of the consultation paper that the NEM should take on the characteristics of other commodity markets. Electricity is an essential service and is regulated accordingly. For businesses, electricity is an essential input, and with the DRM they can choose not to consume if exposed to high prices. For households, they could choose not to consume if exposed to pool prices, but only a handful have chosen this option. For many households, it is not a choice to consume but a necessary requirement. If the ESB wishes to treat electricity like a commodity market, it calls into question the nature of electricity as an essential service. We consider that electricity remains, and should remain an essential service, with a level of regulation that is proportional to the harm that can arise due to a lack of access.

We welcome the opportunity to engage further with the ESB on two-sided markets and other issues forming part of the post-2025 review of the NEM to ensure that a sensible set of reforms can be delivered which truly brings benefits to consumers.

Forecasts

While AEMO would certainly stand to benefit from receiving forecasts of consumer demand and potentially distributed energy resources (DER) output, it already has its own forecasts of these inputs in order to manage the system in real-time. A two-sided market where 'traders' provide these forecasts and face penalties for not meeting their targets will not improve on this. If anything, it adds risk and cost to traders. In turn this will be passed on to consumers.

[3] AEMC, (2017) Non-scheduled generation and load in central dispatch rule change – Final Determination, 12 September 2017.

In theory this would stand to advantage traders who are able to provide accurate forecasts, and a competitive market would reward them accordingly through increased business. In practice, it is more likely that traders seek to gain access to trading the rights of more stable, predictable loads while passing the increased costs onto consumers with less predictable loads.

The discussion paper points to the potential for a selective or compulsory two-sided market to incentivise entry from aggregators and third parties that can use technology to accurately track demand. Such services already exist in the market and are used for a range of reasons, including demand response. While a two-sided market could make the incentives stronger, the fundamental economics of installing such systems will be the primary driver. Participants on the WDRM may seek to use such systems to monitor their usage in order to determine a baseline and measure demand response in real time. A two-sided market is not needed for this to occur. As in the present market, if there is a benefit from a user or third party installing real-time monitoring systems, they will likely do so.

We acknowledge that at present there is no widespread real-time monitoring of customer load. So, although retailers or traders could bid demand into the market in theory, they would be unable to assess their performance, or potentially use DER to 'firm' their demand in real time. It would be incredibly expensive to roll this out for the majority of customers, particularly small customers. At this stage it seems improbable that the benefits of meeting self-forecast targets would outweigh the costs involved in setting up technology to monitor all their customer's sites. A retailer or trader may also wish to invest in behind-the-meter-storage in order to 'firm' their load by charging when forecasts are below actual load and discharging if load is higher than forecasting. Again, this would require real-time monitoring, plus the capital cost of installing batteries. This would be a costly endeavour. Inevitably, higher costs get passed on to consumers through higher prices.

ERM Power is mindful of the ESB's comments around DER, its continued growth and the desire to have DER actively engaged in the market. There is certainly a case to be made for greater transparency around the actions of DER, particularly as battery storage systems take hold in the market. If this is one of the aims of the two-sided market then we recommend DER be dealt with via a dedicated process rather than imposing an obligation across the entire demand-side in order to address a different issue. It may be more beneficial to focus attention on the role of distribution network service providers (DNSPs) in assessing the impact of DER given their knowledge of where these systems are through connection arrangements. DNSPs could in theory provide their own forecasts of expected DER output (or input) in order to inform AEMO's decision making.

Network pricing

The ESB suggests that one of the benefits of a two-sided market would be to enable cost-reflective pricing, changes to network pricing models, and allow customers to choose their own level of reliability. At a basic level, none of these require a two-sided market for implementation. Discussion of cost-reflective tariffs has been around for several years, with state governments choosing moratoria on time-of-use network tariffs for households instead of taking on the political risk of implementation. Alternative pricing models such as SA Power Networks' solar tariff were rejected by the AER.[4] Customer uptake of time-of-use and demand tariffs has been miniscule. Regulated offers like the Default Market Offer and Victorian Default Offer do not lend themselves to more dynamic models. Simply put, there is no barrier that a two-sided market would solve. In fact, it may just make things worse by introducing large costs to adopt a two-sided market without the full range of benefits rolling through. This was certainly the experience of Victoria's smart meter rollout as highlighted earlier.

Of course, business customers are used to more cost-reflective tariffs with demand and time-of-use network tariffs commonplace. One of ERM Power's great successes with customers is our free Network Tariff Optimisation service which examines a customer's load profile to assess whether there may be savings by shifting to a different network tariff. This has not required a two-sided market, just the economic incentive and innovation to develop and

[4] Australian Energy Regulator, Notification and statement of reasons for not accepting SA Power Networks' 2015-16 pricing proposal, June 2015.

offer the service to customers. Residential customers do not face the same economic drivers or widely varying network tariffs so the innovation is less likely to occur. A two-sided market would not change this. Network tariffs could be reformed now without the need to redesign the entire NEM. This would be a far lower cost approach

There are other markets where households face different tariffs based on their demand, similar to a demand tariff. Again, a two-sided market is not necessary for this to happen. In France, customers choose a kVA 'cap' which determines their daily supply charge.[5] If a customer exceeds their cap, a switch trips and they need to reset it and reduce their load. If this happened regularly a consumer could choose a higher limit. The higher the kVA (a proxy for peak demand), the higher the charge. There is no reason that a similar network tariff couldn't bring this to households in the NEM, provided there was political will from governments to allow this to occur.

If the ESB considers that more cost-reflective network tariffs, or a different approach to network charging is necessary, then it should deal with that discreet problem, and gain support from state governments and the AER. This would likely produce far greater benefits at a far lower cost than by seeking to fundamentally change the design of the NEM.

Proposed two-sided market designs

The ESB's consultation paper proposed three possible approaches for a two-sided market: voluntary, selective participation (itself with two different options) and compulsory participation. ERM Power does not consider that there is a strong case for any of them, and we are concerned that the status quo is not considered as an option. There are a range of issues involved in retailers or other traders bidding demand into the NEM, and in how the failure to meet these demand bids will be treated.

While retailers do generate their own forecasts of customer load, these forecasts are not used to provide an accurate forecast of customer load. Instead, this forms part of a retailer's risk management strategy, as an input to indicate how they should contract to an efficient level.

One of the major challenges with forecasting load is the individual customer load is highly variable. The consultation paper noted this in the discussion on selective participation as it states "[large] end user's behaviours are generally less predictable". If large users were therefore required to find traders to bid their load into the market, those with more variable load may find it challenging and face some risk premium due to the variable nature of their load. There is a portfolio benefit to approaching trading so that may help, but the incremental risk of adding a new load is quite high if there are costs incurred with failing to meet demand forecasts in each trading interval.

In addition, network companies are only obligated to provide retailers with actual meter data a number of days in arrears, so retailers' ability to accurately re-adjust their forecasts on a day-to-day basis during periods of high uncertainty, such as during extreme heatwaves or rapid economic downturns, is somewhat limited.

The alternative approach, which is to require the five largest retailers in the NEM to bid in their customer demand is also challenging for different reasons. Firstly, the consultation paper does not set out whether "largest" is defined by customer numbers or total load. This is a critical element of design. In either case, there is an issue of equity around why the largest five retailers are chosen. It may be possible to extend this to several more retailers to achieve greater coverage without necessarily imposing a far greater burden on the extra retailers. Further, there is a question of whether this would apply at a state level or across the NEM. A state-based approach would likely cover more retailers but could leave some with requirements in some states but not in others. Some retailers may also face obligations for small volumes of heavily variable load due to market concentration in certain states.

[5] EDF, Grille de prix de l'offre de fourniture d'électricité – Tarif Bleu. Last accessed 5 May 2020.

In either case, the proposals for a selective participation model have the effect of inefficiently centralising risk within retailers instead of efficiently spreading that risk more broadly. This is because the risks associated with demand-side bids matching the real-time outcomes are magnified for individual retailers (or traders) with under- and over-forecasts having a consequence.

In the current market, retailers' forecasts for hedging purposes are too high or too low in individual trading intervals, but overall, these unders and overs largely cancel each other over time, leaving behind a small residual risk. Under a two-sided market, retailers (or a trader) could be exposed to the risk of demand bids not meeting real-time demand each and every trading interval. Assuming that there is a cost in not meeting demand bids, this would create a risk that cannot be cancelled out. Retailers would therefore have to bear these costs, and this would almost certainly be passed onto consumers.

Instead, we consider that the current market design, where AEMO forecasts demand and dispatches sufficient generation to meet demand, is more appropriate and lower cost. AEMO is in a far better position to provide forecasts of overall consumer demand given the totality of information available to them. That is not to say that the information to which they have access is complete or that their forecasts cannot be improved.

If anything, there is a case for a voluntary market which incentivises load, be it a retailer's aggregated load or a third party, to self-forecast in exchange for a benefit when it performs close to dispatch targets. At present, load can become a scheduled load where it responds to dispatch instructions, but there is no real benefit to doing so. Instead, a load could choose to take on spot market risk and act in the same way without the obligation to meet dispatch targets. Simply put, there is no advantage to being a scheduled load. This is primarily what would have to change. The Wholesale Demand Response Mechanism will achieve this in a limited fashion. We would welcome consideration of how this may be expanded on a voluntary basis to other scheduled load or load wishing to be scheduled on a voluntary basis.

As for the questions or transition periods, this is entirely dependent on the model chosen – noting that ERM Power only supports a voluntary approach. In general, the more substantive the changes, the longer the transition period should be to allow business to adjust and implement the system changes needed.

Conclusion

The concept of a two-sided market merits discussion. The aim to improve the openness and transparency of the NEM is a laudable one and one that could bring benefits. A fit-for-purpose solution is essential, so before pursuing a particular approach, we must first understand what the problem is that a two-sided market is seeking to solve. The consultation paper does not make a clear case for what the problem or market failure is. Without a clear problem definition, it is all but impossible to understand whether any of the proposed models will achieve what they aim to. As we have highlighted, there have been several examples of well-meaning reforms that have failed to deliver the anticipated benefits because of a failure of all parties, including regulators, governments and consumers to take all the steps necessary.

At present, we recommend that if anything is necessary – and ERM Power does not necessarily consider that to be the case – then a voluntary approach should be used to better understand the processes involved, the parties who will likely benefit and how to better incentivise participation. We remind the ESB that the AEMC rejected a limited version of a two-sided market in 2017 because the costs would exceed the benefits. It is hard to see how a greatly expanded one would deliver better results. A rigorous assessment of the costs and benefits will therefore be critical to ensure that consumers can be expected to benefit from any proposed reform.

We welcome the opportunity to engage further with the ESB on two-sided markets and other issues forming part of the post-2025 review of the NEM to ensure that a sensible set of reforms can be delivered which truly brings benefits to consumers.

Please contact me if you would like to discuss this submission further.

Yours sincerely,

[signed]

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