



Electricity Network Economic Regulatory Framework 2020 Review

Stakeholder interviews

21 July 2020

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Abbreviations

Term	Definition
AEC	Australian Energy Council
AEMC, Commission	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Approach Paper	AEMC, Approach Paper, Electricity Network Economic Regulatory Framework 2020 Review, 4 June 2020
CEC	Clean Energy Council
COGATI	Coordination of Generation and Transmission Investment
DEIP	ARENA's Distributed Energy Integration Program
DER	Distributed Energy Resources
DNSP	Distribution Network Service Provider
ECA	Energy Consumers Australia
ENA	Energy Networks Australia
ENERF	Electricity Network Economic Regulatory Framework
EPWA	Energy Policy Western Australia
ERA	Economic Regulation Authority Western Australia
ESB	Energy Security Board
EVs	Electric Vehicles
FTRs	Financial Transmission Rights
ISP	Independent System Plan
IPART	Independent Pricing and Regulatory Tribunal (NSW)
IT	Information technology
LMP	Locational Marginal Pricing
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER, Rules	National Electricity Rules
NERO	National Energy Retail Objective
REZ	Renewable Energy Zone
RIT-D	Regulatory investment test for distribution
RIT-T	Regulatory investment test for transmission
SAPS	Standalone Power Systems
TNSP	Transmission Network Service Provider
VPPs	Virtual Power Plants

1. Introduction

1.1 BACKGROUND

Electricity markets are undergoing rapid transformation because of changing technology and consumer requirements. In 2016, the COAG Energy Council requested the Australian Energy Market Commission (AEMC, Commission) to conduct an Electricity Network Economic Regulatory Framework (ENERF) review to monitor market developments on an annual basis. The ENERF review is now a key strategic document for the AEMC which annually highlights emerging and priority issues in the sector, reports on processes underway to address those issues, identifies gaps in the broader work program, and makes recommendations to the COAG Energy Council on actions to progress necessary reforms. The scope of the review covers the jurisdictions in the National Electricity Market (NEM).

The AEMC has commenced the 2020 ENERF review. On 4 June 2020 it released an approach paper and submissions to the approach paper closed on 2 July 2020 (Approach Paper). The final report is due for publication on 1 October 2020. This year's review will identify a priority list of issues relevant to the electricity sector's transformation that may require attention or reform – beyond the integration of distributed energy resources (DER) – as the electricity sector transformation continues.

Specific issues identified in the AEMC's approach paper were:

- dealing with large transmission investment and contingent projects in the context of Australian Energy Market Operator's (AEMO's) Independent System Plan (ISP)
- risk allocation between distribution networks and consumers
- the need for enhanced consumer engagement.

1.2 OUR SCOPE

We were engaged by the AEMC to undertake a series of interviews with a targeted selection of stakeholders (17) chosen by the AEMC, and to prepare this report that identifies potential emerging and priority issues relevant to the ongoing transformation of the electricity sector. This report, in conjunction with submissions to the approach paper will be used by the AEMC as input to develop its 2020 ENERF review report. We note that we have not reviewed the submissions made to the AEMC and consequently our report does not consider them.

The interviews were undertaken in a context where there are many other current priority issues¹ that are already understood and supported by processes to address them. Regarding these existing priority issues, our interviews were not to explore these in detail but rather to highlight gaps and priorities from each stakeholder's perspective.

1.3 HOW WE UNDERTOOK THE INTERVIEWS

The AEMC selected a list of stakeholders representing a cross section of industry participants that we were to interview. The majority were active primarily in the NEM and two were from Western Australia.²

¹ Current priority issues include Coordination of generation and transmission investment implementation (COGATI), ARENA's Distributed Energy Integration Program (DEIP), Energy Security Board's (ESB's) post 2025 program and the Australian Energy Regulator's (AER's) review of its guidelines.

² Western Australia has its own regulatory framework under the Electricity Networks Access Code 2004.

We worked with the AEMC staff to identify appropriate people within each organisation. The organisations interviews are shown in Box 1:

Box 1 – Organisations interviewed

1. Regulators and government bodies:
 - a. Australian Energy Regulator (AER)
 - b. Economic Regulation Authority Western Australia (ERA)
 - c. Energy Policy Western Australia (EPWA)
2. Consumer representatives:
 - a. Energy Consumers Australia (ECA)
 - b. Uniting Communities
3. Retail representatives and retailers:
 - a. Australian Energy Council (AEC)
 - b. EDL Energy
 - c. Energy Australia
4. Network representatives and businesses:
 - a. Energy Networks Australia (ENA)
 - b. AusGrid
 - c. Essential Energy
 - d. Powerlink
5. Industry bodies and service providers:
 - a. Clean Energy Council (CEC)
 - b. Renew
 - c. Smart Energy Council (SEC)
 - d. Redback Technologies
 - e. Sonnen Australia

We agreed an agenda with AEMC staff. This included a prioritisation matrix that aimed to provide guidance on how to select issue that were high priority.

At the beginning of each interview we checked that the interviewees understood the purpose of the 2020 ENERF review and of the interview. Most had read or skimmed the AEMC's Approach Paper. We started with an open-ended question as to what the interviewee regarded as priority and emerging issues - we did not seek to constrain them in their choice of issues. When interviewees had finished discussing their list of priority and emerging issues, and time permitting, we tested their views about other possible priority issues that had been raised by others and which we thought they may have views on. In some cases, the interviewees had not thought about the issue but agreed that it was a sound issue to raise. We also asked interviewees about their views on the vision for the future NEM.

We prepared notes for each interview and then sent the interview notes to be checked by the interviewee.

1.4 STRUCTURE OF THIS REPORT

The remainder of report sets out our interpretation of the interview material and the direct feedback we received from each interviewee.

This report is structured as follows:

- Section 2 – how we have interpreted the interviews and reported on the outcomes of them
- Section 3 – sets out a summary of the vision and network transformation management
- Section 4 – sets out the priority and emerging issues for transmission
- Section 5 – sets out the priority and emerging issues for distribution
- Section 6 – sets out other issues raised by interviewees.

2. Interpreting the interviews and how we have reported

Before presenting the interview results it is useful to discuss how the AEMC might interpret them, the reliance that should be placed on the interviews and how we have presented the results.

As would be expected, the areas of focus identified by interviewees reflected their organisation's role in the industry, participants' particular areas of involvement or expertise, and often the level of resourcing of their organisation. Most interviewees tend to focus on either transmission or distribution, but few are closely involved in both.³ Other than well resourced entities such as the AER, it is clear that most participants are constrained by limited resources and therefore understandably target their efforts on engaging on priority and emerging issues that are important for their organisation.

For these reasons, other than the AER and Australian Energy Council, few participants stood back and objectively weighed up priorities across the entire industry value chain in terms of what issues were most important for promoting the long-term interests of consumers. Therefore, in our view caution is needed in interpreting the relative weight of opinion about different issues in transmission and distribution as an indication of priority. We have structured our analysis to separately report on transmission and distribution sector issues, but we do not have a view whether one sector is more important than the other.

Regarding feedback from Western Australia, it has its own regulatory framework (under the Electricity Networks Access Code 2004). We sought to focus our discussion on issues that were likely to be common to those arising in the National Electricity Rules (NER, Rules) framework.

There was variation in the extent interviewees focused closely on identifying priority and emerging issues as defined in the Approach Paper. Some had thought carefully about distinguishing the emerging from current priority issues, whereas others presented issues and concerns that were top of mind without distinguishing clearly between emerging and current priority issues, or relating this clearly to the prioritisation matrix. We therefore needed to apply some judgement in organising this feedback.

Several issues were clearly state government or COAG Energy Council policy issues or were still some way off in the future rather than emerging (for example the impact of Electric Vehicles). We classified these as 'Other Issues' and they are noted in section 6.

³ The AER, Australian Energy Council (AEC) and Energy Networks Australia (ENA) are involved in both transmission and distribution.

As noted, we endeavoured to get feed-back on prioritisation of issues using the matrix set out in the agenda. Where participants did not clearly specify a priority, we proposed a priority rating in the interview notes and asked them to check our proposed rating. In many cases participants clearly found it difficult to set a priority rating, particularly whether it was a high or medium priority, and so the AEMC should be careful in placing too much weight on the priority ratings.

Most interviewees followed the stated goal and identified particular emerging and priority issues. There were a number, however, who focussed more on the way in which the distribution network transformation was being managed and the vision for the market.

In this report we have generally not explained the context or background to current reforms initiatives.

3. Vision and network transformation management

3.1 VISION FOR THE TRANSFORMATION OF DISTRIBUTION NETWORKS

There was a high level of commonality in the vision for the NEM which focused heavily on distribution network transformation, particularly in relation to distributed energy resources (DER). When this question was raised many of the interviewees also discussed their views and concerns about the management of electricity market transformation. Concerns included: a lack of urgency; the rapid pace of and ambiguity of the current reform processes (these are contradictory points); future uncertainty; the need for better consumer and stakeholder engagement; and a lack of investment to support DER. Table 3.1 sets out our distillation of common feedback received from stakeholders on the vision for the future electricity market and for managing the transformation of distribution networks.

Table 3.1: Potential elements for a vision for the transformation of distribution networks

Stakeholders' vision for the future electricity market	Feedback
<p>A market with a growing role for alternative generation and storage solutions - including within distribution networks, behind the meter⁴ and standalone power systems (SAPS) and microgrids.⁵</p> <p>Distribution networks become a platform for two-way flow (two sided</p>	<p>Generation will be far more diversified (e.g. storage) and distributed by multiple parties (i.e. by generators, networks, consumers). Expect a much larger role for consumer owned DER to be part of the grid – for example, aggregated services of consumer owned storage. The resulting system will be far more complex but will be more resilient.⁷</p> <p>The future role for behind the meter DER services is consistently underestimated – the economics of avoiding network and other costs for grid connected utility scale generation will drive increased adoption of behind the meter DER. Up to 50% of total energy demand could be provided on this basis.⁸</p>

⁴ Clean Energy Council (CEC), Redback Technologies.

⁵ AEC, Renew, EDL Energy, Essential Energy, Energy Regulation Authority Western Australia (ERA), Energy Policy Western Australia (EPWA), Sonnen Australia.

⁷ Renew, EDL Energy, AusGrid.

⁸ CEC.

Stakeholders' vision for the future electricity market	Feedback
<p>market)⁶ of electricity and provision of new services that support this market.</p>	<p>The cost of batteries is decreasing, and hydrogen may substitute some electricity uses. It is likely that the market will be managed using big data sources, artificial intelligence and dynamic constrained management.⁹</p> <p>Continued policy and Rules focus on ensuring that behind the meter DER are facilitated.¹⁰</p> <p>What is the community value for new services, where should they be located, and should they be competitive or regulated services?¹¹</p>
<p>An industry with improved levels of trust and collaboration and which is more flexible in thinking how the future will evolve¹²</p>	<p>Currently, the energy market operates in a low trust environment. There is also low trust between retailers and distributors potentially resulting in sub-optimal market reform outcomes.¹³</p> <p>There are also low levels of trust in the industry by consumers.</p> <p>Policy setting and reforms need to understand dynamic markets – which requires ongoing and consistent consumer engagement into agenda setting and decisions made, but accept that some decisions will not be ideal and that mistakes / failures (within an acceptable bound) will be made.</p>
<p>A regulatory framework for electricity networks that puts a greater onus on networks to think more creatively and operate more efficiently¹⁴</p>	<p>There may be appetite to move away from the current regulatory framework where the AER makes decisions on component costs to a regulatory framework that puts the onus on networks to think more creatively and operate more efficiently. For example, something like the UK electricity framework where networks are required to submit business cases and demonstrate that consumers approve the business cases. The AER would place more emphasis in its assessment on the quality of the business plans and the extent they meet customers' evolving needs. This is not a committed position within the AER at this stage, but it could be open to exploring this type of reform.¹⁵</p> <p>Network businesses were concerned that it is currently difficult to get AER approval for DER related investments and were looking for changes that would better facilitate future focused investments. This view was also supported by some DER service providers.¹⁶</p> <p>Consider improved forward looking incentives to ensure network services are consistent with DER policy and encouraging new investment from non-network service providers.¹⁷</p>

⁶ AER, EDL Energy, ENA, ECA,

⁹ Essential Energy.

¹⁰ CEC.

¹¹ Smart Energy Council (SEC).

¹² Uniting Communities, Energy Consumers Australia (ECA), Redback Technologies, SEC.

¹³ Uniting Communities.

¹⁴ AER.

¹⁵ AER.

¹⁶ Essential Energy, AusGrid, Redback Technologies.

¹⁷ AEC, ERA, EPWA, Redback Technologies.

Stakeholders' vision for the future electricity market	Feedback
	The regulatory framework needs to allow for the ability to approve no regrets investment that might not have a proven business case but needs policy support. ¹⁸
An approach to managing transformation of the market that is adaptable and moves at the right speed	<p>The reality is it is difficult to know exactly what energy markets will look like in five to 10 years, so there should be less focus on prescribing the future and more attention to managing uncertainty through flexible arrangements.¹⁹</p> <p>The current reform agenda is very ambitious. Far too many areas are being looked at which is confusing for consumers and very difficult for the market to implement given the breadth of implementation issues and resource constraints.²⁰</p> <p>Given the uncertainty of what the future looks like, the focus of the regulatory framework should be around the services to consumers rather than current industry roles. Also, the framework will need much more inbuilt flexibility rather than transactional or classes of business.²¹</p> <p>Greater emphasis on trials and processes to learn and adapt, and ensure flexibility. Identify no regrets actions and investments.²²</p>

Other views on elements of the vision for the future electricity market that were not widely raised were:

- the future market will have good liquidity²³
- regulatory bodies (AER, AEMO) are obligated by the electricity regulatory framework to consider emission targets in their decisions.

3.2 VISION FOR THE FUTURE TRANSMISSION GRID

There was little focus on the vision for the future transmission grid. However, there was one notable view which is important. Powerlink considered that there will be increasing competition for parts of the transmission system. This implies a different vision for the transmission grid than is commonly held. This is discussed further below.

4. Transmission

There was limited focus in the interviews on NEM transmission issues. As noted above, this is likely to reflect the selection of the stakeholders and their areas of interest and does not necessarily reflect the importance of the issues. Given the large amounts of transmission investment proposed in the Integrated System Plan (ISP) and the current transmission connection issues, it is arguable that some of these issues are of high priority, as highlighted by those organisations with a transmission focus.

¹⁸ Essential Energy, ERA.

¹⁹ Uniting Communities, Essential Energy, ENA, Powerlink.

²⁰ Uniting Communities, EDL Energy, ENA.

²¹ AEC.

²² Essential Energy.

²³ EDL Energy.

4.1 PRIORITY EMERGING ISSUES

4.1.1 Transmission planning and investment

Regulatory framework implications of large discrete non recurrent transmission investments

AER review of the future transmission regulatory framework

The AER has commenced internal work which has been discussed with AEMC and AEMO, on the future transmission regulatory framework. The AER has engaged Houston Kemp to provide advice. The AER is aware that there will be a number of contingent projects that come from the actionable ISP which arises from a very recent Rule change that is presently being implemented. The projects are expected to be a few large discrete non-discrete projects which will be difficult for the AER to assess given the lumpy and unique nature of the contingent projects.

The AER considers this work is of high priority given the large amount of potential investment involved.

How best to promote optimal aggregate transmission outcomes

Closely related to the question of the regulatory framework, it was noted²⁴ that there is considerable pressure from governments and others to build large transmission projects which are seen as a solution to address various jurisdictional issues (i.e. closure of brown coal generation in Victoria). The Victorian government had recently unilaterally changed the transmission rules applicable in its jurisdiction. These solutions are considered largely in isolation of each other and may in fact be inconsistent. Given this, the aggregate outcomes may not be optimal.

How does the AER ensure that the right aggregate outcome is achieved?

Existing RIT-T rules should continue to be applied

It was noted²⁵ that the biggest risk for merchant generators is government intervention distorting the economic approval process. There are concerns about the nature of how the ISP has developed and whether it will bypass the RIT-T process in the future. To date, the rules that have actioned the ISP have largely supported continuing the rigorous cost-benefit analysis of RIT-T and the ability to challenge by industry was considered positive.

This discussion highlighted that in this case the emerging issue was not about changing the regulatory framework, but rather ensuring the existing RIT-T rules and process continued to be properly applied, and that any government funding was also to be included in the analysis.

Renewable Energy Zones (REZs)

The AEC and Powerlink are concerned that the political narrative driving creation of REZs was not correct. Building REZs shifts the location rather than the opportunity for generation. It encourages REZs to locate remotely rather than locally (which may or may not be socially optimal) rather than not be built at all. The AEC considered that the basis of decision on REZs should be on least cost option across the supply chain. The current RIT-T process could, in general, work to produce the right outcomes provided

²⁴ AER, ECA, Energy Australia. AEC made similar points.

²⁵ AEC, CEC, AusGrid, ECA, EDL Energy.

it is properly applied. There was a concern that government policy attention on REZs may lead to proper analysis not being undertaken leading to inefficient decisions.

Powerlink suggested that there needs to be clarity on the problem(s) that the REZs are looking to solve, and how different REZs are from other transmission related reform initiatives. Consideration should also be given to whether REZs will undermine genuine investment for large / mature developers in the context of longer term investment implications.

Consideration should be given to whether any tweaks to the RIT-T rules and application of them are required to encourage robust economic assessment across the whole supply chain.

4.1.2 Generation connections and system security

Principles for allocating obligations to solve system security challenges for generation connection

The strong growth in grid scale renewable generation is creating significant challenges for ensuring system security and system strength. The AEMC is considering a series of Rule changes to address issues such as system strength and inertia. The recent approach has emphasised placing strong obligations on connecting generators to solve these issues (“do no harm approach”).

The AEC, ERA, Powerlink and Sonnen Australia considered this approach was likely not to be producing the optimal outcome. They proposed that there should be a review of the underlying technical and economic factors to inform more optimal principles for allocating obligations to solve system security and system strength challenges that can address the issues more holistically and proactively.

They proposed a framework where in the future the optimal solution would include a balanced use of:

1. performance standard obligations imposed on connecting generators (via AEMO)
2. transmission Network Service Provider (TNSP) standards to address certain network characteristics. TNSPs would work out options to meet standards and justify these to the AER as part of the regulatory approval process
3. development of new ancillary service markets, noting there are limits to markets.²⁶

The AEC, ERA, Powerlink and Sonnen Australia considered that the ESB, AEMC (and AEMO) need a sophisticated holistic economic and technical understanding of these options and the principles for applying them. A review was required of the underlying technical and economic factors to inform principles for allocating obligations to solve system security challenges to ensure that the right mix of the various options is achieved.

4.1.3 Is transmission market power reducing?

As noted above, Powerlink considered that some transmission services may increasingly be competitive and consequently TNSPs have less market power. We did not have time to fully explore this view.

However, we understand that this view may reflect the following factors:

- the expected growth in DER (located in distribution networks and behind the customers’ meters)

²⁶ Some security issues are local and not amenable to market solutions.

- the wide range of location choices for grid connected renewables which increases²⁷ the range of locational options for future generation investment²⁸
- the relatively short economic life of renewables investments, compared to the technical life of transmission investments
- the potential for technological innovation and cost reduction in grid connected renewable generation in the long term which may change future renewable generation location decisions.

If all these factors emerge then the elements of TNSPs systems that are more remote from the major load centres could increasingly compete both with each other and with distribution networks to connect new generation.

Powerlink considered that there was an ‘investment cliff’ emerging where TNSPs will be reluctant to invest (unless they can secure contracts) due to increasing competition making cost recovery increasingly uncertain – ‘TNSPs don’t want to invest out more than 15 years’. We heard that one other TNSP has a similar view.

Powerlink noted that transmission connections were deregulated and considered there was a need for a process to enable removal or reduced economic regulation for TNSP services where it is no longer required due to sufficient competition emerging. This could be analogous to the coverage decision process for gas pipelines.

In terms of priority, Powerlink noted that while this is a longer term issue, it would take some time to consider and so the thinking needs to start now.

4.2 EMERGING GAPS

Locational pricing – alternatives to COGATI

The AEC considered that while in principle, Locational Marginal Pricing (LMP) and Financial Transmission Rights (FTRs) are sound reforms, there is strong opposition to them, such that (in AEC’s opinion) they may not be implemented. The AEC considered that there is a need therefore to look to options for some type of partial locational pricing that would improve locational signals that are capable of acceptance and implementation. Options need to promote more efficient dispatch and improve investment efficiency. For example, the Rules already allow for creation of new regional subdivision. e.g. in north Queensland.²⁹ Given that rural customers are likely to benefit from this more than in the past there may be an opportunity to revisit this question.

This issue may be addressed through application of existing Rules, or through Rule changes that introduce some form of partial locational pricing.

²⁷ Whereas thermal and hydro generation needs to be located close to fuel sources (coal, gas pipelines, hydro resources) which are highly location specific.

²⁸ Farrierswier interpretation

²⁹ Powerlink.

4.3 OTHER ISSUES

4.3.1 Alternative options for organising the national transmission planning function

Several stakeholders³⁰ questioned whether AEMO as a non-profit transmission planner has the right incentives to undertake robust unbiased analysis. There is seen to be a possible risk of bias arising from AEMO's role as a planner that has its own particular objectives (in particular ensuring system security).

It was also suggested that transmission investments are very long-lived assets and TNSPs currently do not have long term contracts. They rely on the National Electricity Law (NEL - e.g. the pricing principles), the NER and five year regulatory reset processes to recover capital invested over time. TNSPs may become more risk averse about long term asset standing risk due to concerns about increased competition, and/or government involvement in transmission projects which may lead to over building.

It was posited that an independent transmission planner could potentially better manage the risk of planning bias; and provide a more robust policy and commercial basis for managing transmission stranding risk.

This is a government policy issue. There was not a strong opinion that this issue should be examined and when it was discussed, interviewees had not given much thought to it. It may potentially arise from the work being undertaken by the AER on the regulatory framework implications of large discreet non recurrent transmission investments (see above).

5. Distribution

There was significant focus in the interviews on NEM distribution issues, particularly around the role that DER, SAPS and microgrids are to play in providing services to consumers and in delivery of Distribution Network Service Providers (DNSP) obligations, how consumer engagement could become more effective, and the need to review the current risk allocation underpinning the NEL and NER.

5.1 PRIORITY EMERGING ISSUES

5.1.1 Risk allocation between distribution networks and consumers

In its Approach Paper, the AEMC suggested that the risk allocation between distribution networks and consumers may be one of three potential priority emerging issues. In summary, the Approach Paper noted that:

- DNSPs are subject to regulatory obligations to connect all customers that request a connection and are bound by reliability standards – which has implications for considering how related risks should be allocated.
- Forecasting risks associated with estimating future efficient levels of capital expenditure may lead to the risk of under or over investment with other consequential risks (e.g. poor reliability outcomes, over investment).

There were few parties who proactively raised this as a priority emerging issue. The ENA strongly supported this being an emerging priority issue and proposed a comprehensive review - its proposed

³⁰ AER, Renew, AEC, ECA.

review scope is set out in Box 2. The AER said that it needed more information to assess whether this was an emerging issue. Uniting Communities agreed with the AEMC's description of the issue but that it also needed to consider the risk allocation between retailers and network (for example, accountability for bad debt).

Box 2: ENA Proposed scope for a review of risk allocation between distribution networks and consumers

The underlying basis of risk allocation in the Rules is being challenged:

- Certain decisions on costs are locked into the legislative framework and do not allow for change in market circumstances, such as rate or return.
- How should asset stranding risk be shared and treated in the cost stack?
- Redefining risk allocation between participants and consistency across the framework – for example, the recent AER proposal for retailers to defer paying network charges when customers do not pay their bills over the COVID-19 period.
- Insurance – given the recent significant increase in premiums, need to consider the affordability of network insurance (costs, jurisdictional requirements, pass through events).
- The current approach to estimating inflation and providing for a debt allowance results in under recovery of efficient allowance due to higher RBA forecast compared with actual.

There are a number of emerging gaps or areas where there is a lack of clarity in risk allocation. Rather than dealing with these issues separately, there is an opportunity to deal with them through a single holistic process that ensures the linkages are understood and which can produce a more coherent and robust approach to risk allocation.

For example, if a major event occurs (e.g. cyclone, or bushfires), a formal principal-based framework would facilitate dealing with the event.

A review could involve completing a full mapping of location and allocation of current risks, and then developing principles for assessing risk allocation to be used in assessing Rules changes and assisting the AER when making decisions. Once completed, the work would check whether any changes to the Rules are required - it is unclear if Rule changes are required to give effect to such a framework.

5.1.2 Enhancing consumer engagement

The need for enhanced consumer engagement was also highlighted by the AEMC in its Approach Paper. Most interviewees with an interest in distribution networks offered views (unprompted) on consumer engagement. (It was noted³¹ that TNSPs have also been focusing on improving engagement with their stakeholders (generators, major users, government) but that no practical issues were identified with TNSP consumer engagement and this is not addressed further).

³¹ Powerlink.

This section considers the purpose of consumer engagement, sets out views on the current state of play for consumer engagement for distribution networks and then sets out suggestions for what could be done to further enhance consumer engagement.

The purpose of enhancing consumer engagement

The AEMC's 2019 ENERF review report stated that the consumer engagement was one of the tools crucial to integrating DER and optimising benefits for all customers. Consumer engagement involved:

'heralding the cultural change required in the sector that will inform the extent to which networks will be adaptable to transition and a more consumer-centric and wholly integrated market.'

While there was no explicit discussion to clarify what the interviewees thought was the purpose of consumer engagement, in our view there was wide-spread implicit support for the Commission's purpose statement above. However, we note that in practice many stakeholders see the purpose of consumer engagement as broader. In price resets consumer engagement is also focused on engaging on fundamental matters such as the prudence and efficiency of expenditure, service standards and whether network price determinations are reasonable.

Current status

NewReg Trial | The NewReg trial made significant progress in the past 12 months but the outcomes will not be able to be fully understood until the AER has made its final decision next year. Those who had been close to the NewReg trial were generally supportive of it.³² The AEC noted that success was 'dependent on a capable and technically sophisticated consumer group.' It was suggested that the next step would be a full analysis of how the NewReg trial had affected the AusNet Services proposal and the AER decisions, so that stakeholders can understand its impacts.³³

Other consumer engagement processes | Other distribution businesses have also given attention to enhancing consumer engagement, though these were not explored in detail. Uniting Communities commented that 'consumer engagement is doing quite well' (its main concern was its ability to participate with limited resources). 'Individual dialogue tends to work quite well (i.e. network resets), but improvements should be made to link and collaborate consumer groups to build trust and confidence in energy markets and energy businesses.' A common concern was the pace of change. Uniting Communities noted that as the pace of change picks up in the policy and regulatory environment there are 'ever more gaps and issues upon which meaningful consumer engagement occurs.'

Opportunities to enhance consumer engagement

There was widespread support for further work to enhance consumer engagement. The various suggestions are set out below.

What consumer engagement approaches should future development be based on?

There appeared to be consensus³⁴, at least at the moment, that any future initiatives to enhance consumer engagement should be based on enabling a variety of different engagement models, and not be based only on the NewReg model.

³² AEC, Renew, ENA, ECA.

³³ Renew, ECA, ENA.

³⁴ AER, ENA, ECA.

Update AER's consumer engagement guideline

In 2013 the AER published its inaugural *Consumer Engagement Guideline for Network Service Providers*.³⁵ Given this was over seven years ago and subsequent developments, the ECA suggested that there could be an opportunity to review and update the guidelines. This would be an opportunity for dialogue to further evolve a principle-based approach to consumer engagement, that reflects current experience and thinking. However, the ECA also suggested that this would need to be based on a comprehensive review of learnings and potential new models (including the NewReg trial and other consumer engagement processes). 'It would not be worth undertaking a review of the guidelines unless the review process was comprehensive.'

Uniting Communities proposal

Uniting Communities proposed a range of actions.³⁶ We have set these out in full as shown in Box 3.

Box 3

Uniting Communities proposal for enhancing Consumer Engagement³⁷

- Develop processes that build trust more effectively by:
 - increasing funding for existing (and potential) consumer advocate organisations to enable an ongoing, base level of energy consumer engagement and advocacy service in each jurisdiction, commensurate with jurisdictional size and scope
 - revising guidelines for ECA grants to enhance continuity of consumer advocacy
 - ensuring that market bodies, network businesses, retailers and governments pay sitting fees and participation costs for consumer engagement
 - enabling Energy Consumers Roundtable to undertake coordination of prioritised input into policy and regulatory processes
 - enabling regular networks and consumer groups and separate retailer and consumer group dialogue
 - completing a series of at least annual Innovation and Future Market briefings which should be held for consumer groups and advocates to facilitate knowledge transfer
 - empowering the AER to develop a minimum set of conditions that would need to apply should some form of negotiated agreement be established as a worthwhile goal for future regulatory processes.

Consumer engagement representation issues

There were a number of comments about consumer engagement representation issues.

- **Confidence in governance for consumer representation** | There were comments that to the extent consumer engagement is becoming more influential in decision making, that there needs to be confidence about governance, including confidence that the consumer representatives were capable of

³⁵ <https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/consumer-engagement-guideline-for-network-service-providers>

³⁶ Report for Uniting Communities, Resourcing Consumer Engagement, Seed Advisory, Peter Eben, July 2019.

³⁷ Ibid.

understanding, and were aligned with the interest of the relevant consumer groups; and that there was no risk of capture by the DNSP.³⁸

- **Appropriate capability, resourcing and time commitment** | Consumer representatives need the skills, time and resourcing to match the roles required under any particular consumer engagement model. For example, the NewReg model - which requires consumer representatives to negotiate parts of the price submission with the DNSP - is demanding in terms of time requirements and capability of the consumer panel members. The comments from Uniting Communities (above) also go to resourcing questions.³⁹
- **Diversity in capability** | It was suggested that consumer representation needs to reflect greater diversity in experience of the parties involved (particularly technology experience balanced against not making consultation groups too large).⁴⁰
- **Continuity in resourcing** | It was suggested that consumer engagement should be an ongoing function so consumer groups need to be resourced over a reasonable length of time and with adequate capacity to respond to priority processes.⁴¹

Options for Rule changes to facilitate consumer engagement

There were a number of suggestions for Rule changes that could be explored to improve consultation outcomes and/or enable better regulatory processes. As noted above, it was considered that any Rule changes should be aimed at facilitating a variety of consumer engagement models, and not be focused only on the NewReg model.

The AER did not consider that the current Rules were a significant impediment to its decision-making and that it can effectively facilitate consumer engagement. However, the ENA suggested that greater certainty was required of how the AER takes account of consultation outcomes which may require a Rule change. The potential Rule change options are set out in Table 5.1 below.

³⁸ AusGrid, Powerlink, Redback Technologies.

³⁹ AEC, ERA, AusGrid, Redback Technologies.

⁴⁰ Redback Technologies.

⁴¹ Uniting Communities, ECA.

Table 5.1: Options for Rule changes to facilitate consumer engagement

Rule change option	Discussion
Less prescriptive pre-lodgement process	<p>There was support including from the AER, to review the prescriptive consultation processes in the Rules that can arguably result in duplication of effort require by the AER pre-lodging.</p> <p>A review could aim to make the Rules less prescriptive, provide the AER with more discretion, and enable a more streamlined, tailored pre-lodgement process. The AER suggested that it could have flexibility to ‘work out the best pre-lodgement approach on a network by network basis based on the consumer engagement approach a DNSP wishes to adopt.’ The AER could have discretion to change the pre-lodgement process when suitable alternative pre-lodging engagement occurs. This change would however raise a question as to the role of the AER in the upfront planning.⁴²</p> <p>Changes to the Rules that deal with pre-lodgement could introduce some efficiencies in the pre-lodgement consultation process.</p> <p>There was also a comment that the current pre-lodgement processes need to start far in advance of the beginning of the regulatory period. Technology and other transformation changes are moving very fast, and forecasts necessarily change over time, and this makes the value of some of the early pre-lodgement prolongment processes questionable (as it quickly becomes out of date).</p>
Incentives on network businesses to improve consumer engagement	<p>Thought could be given to whether there should be incentives on DNSPs to improve or adopt a minimum level of consumer engagement.⁴³</p>
Minimum conditions for negotiated agreements	<p>As noted above, United Communities suggested an option to empower the AER to develop a minimum set of conditions that would need to apply should some form of negotiated agreement be established as a worthwhile goal for future regulatory processes (noting that this is consistent with NewReg). The ENA also supported this view.</p>
Should the AER put weight on consultation outcomes in reset decisions	<p>An option would be to explore whether the AER can put weight on consultation outcomes in reset decisions.⁴⁴</p>
Agreed network incentives schemes	<p>The ENA suggested that consideration be given to Rule provisions to enable network incentives schemes that are more relevant to services provided and enable customers and networks to agree these more quickly.</p>
The regulatory determination processes	<p>How can the formal regulatory determination process flexibly adjust to reflect the scope of issues on which consumer and network perspectives differ? Are the Rules a constraint to this occurring?⁴⁵</p>

⁴² ENA, ECA.

⁴³ Renew, EPWA, ENA.

⁴⁴ ENA, AusGrid.

⁴⁵ AER, Powerlink.

5.1.3 Standalone Power Systems (SAPS) and microgrids

Several parties⁴⁶ suggested that there is likely to be an increased role for SAPs and microgrids in how DNSPs meet their supply obligations and manage emergency and fault events.

It was suggested that the current framework does not incentivise optimal investment in SAPS and microgrids, and that more needs to be done to ensure that investment is encouraged. The AER noted that it is currently considering how SAPS and microgrids could be used to reduce bush fire risk and manage network infrastructure replacement at lower cost.

The potential Rule change options are set out in Table 5.2 below.

Table 5.2: Options for Rule changes to facilitate investment in SAPS and microgrids

Concern	Proposed solution(s)	Feedback detail
What is the role of SAPS and microgrids in DNSPs meeting their obligations and providing services, or should they be competitive services?	Confirm whether the Rules provide the AER with enough flexibility to address.	The AER is considering the role of SAPS to reduce bush fire risk and manage network infrastructure replacement at lower cost. ⁴⁷ Decisions ⁴⁸ are required on: <ul style="list-style-type: none"> • How should they be regulated? • What are the terms of access and pricing? • What customer pricing protections are required?
Treatment of stranded asset risks	Confirm whether the Rules provide the AER with enough flexibility to address.	How will consequential stranded assets be treated, noting that this is expected to become a bigger issue over the next five years? It is unclear what the consequential impact is on asset stranding and on network tariffs, particularly as often only impacts part of the assets. ⁴⁹

⁴⁶ AER, CEC, EDL Energy, Essential Energy.

⁴⁷ AER.

⁴⁸ ERA.

⁴⁹ AER, CEC, EDL Energy, Essential Energy

Concern	Proposed solution(s)	Feedback detail
Are there appropriate price signals to encourage investment?	<p>Identify if there are any significant impediments to investment.</p> <p>Review network tariffs to ensure there are appropriate price signals – need to consider marginal pricing versus smeared costs.</p> <p>Understand if any cost subsidies exist by jurisdiction which will unwind as assets are replaced likely resulting in increased network prices.</p>	<p>There is large potential for investment in SAPS. The regulatory framework should incentivise the most efficient non-network solutions.⁵⁰</p> <p>Network tariff reform would help drive this outcome, but it is difficult policy issue for governments. Without network tariff reform there is a need for appropriate incentives on networks to make efficient decisions.</p> <p>It is unclear what the consequential impact is on asset stranding and on network tariffs, particularly as often only impacts part of the assets.⁵¹</p>

5.1.4 Technical standards

Problems in the development of technical standards and compliance with them, were raised by several interviewees.⁵² It seems likely that these problems are impeding the efficient development of DER and raise safety and other risk concerns.

We note that the AEMC is currently consulting on a Rule change submitted by AEMO on 5 May 2020 to obligate AEMO to create a subordinate instrument for a minimum technical standard for DER and a definition of DER in the NER. The AEMC’s consultation closes on 23 July and we expect that some of the issues set out here will be addressed through that process.

Gaps in governance for developing technical standards

It was suggested that there should be improvements in governance⁵³ for developing technical standards.

The current standards environment is rapidly evolving, but development of standards is not keeping pace. Developing technical standards is time consuming and currently does not necessarily involve the right skill mix. Standards processes rely on voluntary input by individuals in their spare time, and there is no vetting process to test that individuals are experts or have the right credentials. Arguably, this now needs more involvement by dedicated paid professionals. This may require changes in governance processes.

It was suggested⁵⁴ there should be consideration of how distribution technical standards relating to DER could be set optimally so that they meet necessary and efficient technical network requirements, but are not excessive or limit competition or business and industry development. There was concern that DNSPs may be gold plating or that connection standards may be limiting the competitive procurement from

⁵⁰ AEC, Uniting Communities, EDL Energy, Essential Energy, Redback Technologies, Sonnen Australia.

⁵¹ Essential Energy.

⁵² CEC, Sonnen Australia.

⁵³ CEC, EPWA, Sonnen Australia, ENA.

⁵⁴ AER, AEC, EPWA, Sonnen Australia.

other service providers (such as for frequency control) and the development of a market in related services, as well as transferring costs to consumers (such as VoltVar).⁵⁵

Sonnen Australia noted that by default, the CEC is the main group responsible for developing standards and tries to influence industry and regulator on technical standards (DER), although it was questioned whether this is appropriate. However, it was recognised by a few parties that AEMO has been playing a greater role in development of standards which is a positive step forward, but not ideal.

It was noted⁵⁶ that there were consistency issues with the installation requirements under the National Construction Codes and that there needs to be a consistent process as to how standard development is managed and administered (including compliance).

Suggestions⁵⁷ to address the concerns include:

- The need for clear accountability for the party that is responsible for developing and monitoring standards. Look to overseas examples for simpler and clearer governance and development processes, such as the UK, which deal with:
 - the current risks associated with resourcing and funding
 - support and monitoring of compliance.
- The need to consider electrical compliance and overlay with the building installation requirements that specify materials that must be used in installation. The ESB, AEMC (and AEMO) need a sophisticated holistic economic and technical understanding of the options.

While governance of technical standards appears to be a government policy question, AEMC could take a lead role in analysing the problems and potentially raising it with governments.

Compliance with technical standards

The CEC noted that whilst regulation of voltage standards appears to be a state issue, it has national implications. The CEC noted that the recent UNSW report commissioned by Essential Services Commission Victoria highlights that excessive voltage is not driven by rooftop PV solar but by other network issues.

There is concern about inconsistencies with other Rule changes. For example, Rule change for DNSPs to charge for export on the basis that voltage management is driven by solar when in fact solar not the main cause.

Effective voltage management is important for maximising hosting capacity at national level but is regulated at the state level, noting that it is not sufficiently clear how voltage regulation is undertaken in each jurisdiction.

The CEC suggested that:

- each state should be clear on understanding the drivers for voltage management (solar versus DNSP driven)
- each relevant government department should consider if there are any changes needed to state based Distribution Network Codes or licences.

It was accepted that this is likely to be a matter that is outside the AEMC's jurisdiction.

⁵⁵ AEC.

⁵⁶ Sonnen Australia.

⁵⁷ Sonnen Australia.

Data and communication standards and compliance

Sonnen Australia noted that thinking is required on whether Virtual Power Plants (VPPs) be regulated, specifically in relation to data security, consistent Rules around transmission and storing of data that reflect consumer rights. Consideration should also be given to whether a regulatory body should be given oversight (AEMO focusses on functionality components only), and that policy decisions are required on roles and responsibilities, and how they are provided (regulated versus competitive market).

5.2 EMERGING GAPS

5.2.1 DER reforms

Most stakeholders had views about the current reforms set out in section 2.2 of the Approach Paper which are concerned with different aspects of transformation of distribution networks to enable expanded use of DER.

Generally, there were little, or no concerns raised about the specific actions themselves, and a few stakeholders commented positively about the work being undertaken. However, a lot of stakeholders were either unclear about the full extent of the DER reforms; had various concerns about the overall effect on them or whether they would be effective; or had views on the approach to the management and coordination of DER related actions. There were also a variety of views about what could be done to address their concerns.

This feedback is set out in Table 5.3 below (note we have applied our judgement in how we organise the comments. Stakeholders who did not express such concerns were the AER and Powerlink.

Table 5.3: Feedback on DER Reform

Concern	Proposed solution(s)	Feedback detail
Insufficient urgency on network transformation	Consider how to accelerate the rate of transformation.	The pace of solar PV installation continues to be rapid. This is already causing problems which will become more severe as penetration increases. There will also be increasing lost opportunity to benefit from DER. ⁵⁸
Reform agenda is too ambitious / moving too quickly	Slow down the pace of change.	Concern that the number of different processes underway, each with their own consultation and processes make it difficult for businesses and consumers to keep up. Far too many areas are being looked at which is confusing for consumers and very difficult for the market to implement given the breadth of implementation issues and resource constraints. ⁵⁹ All agencies doing superficial engagement, rather than in depth consultation with

⁵⁸ Redbank Technology.

⁵⁹ Uniting Communities, Energy Australia.

Concern	Proposed solution(s)	Feedback detail
		<p>consumers that have the time and capability to participate.⁶⁰</p> <p>The Government sector finding it hard to engage in the detail, given the impact of emerging technology and the level of complexity.⁶¹</p> <p>Do less but do it better – hasten slowly – including with greater consumer engagement.⁶²</p>
<p>Lack of sufficiently clear strategic direction on network transformation</p>	<p>Establish a clearer strategic direction on network transformation.</p> <p>Consider if, how and when the future respective roles of AEMO vs DNSPs in managing two-way grid should be resolved. Needs to consider how to manage future uncertainty.⁶³</p>	<p>Work was completed on DER options in addressing system security and reliability in the ENA Open Energy Network project⁶⁴ trials (ENA and AEMO), and work is being completed on ARENA’s DEIP and the Independent Pricing and Regulatory Tribunal (IPART) is completing a reliability standard review for two way flows of electricity and SAPS.</p> <p>However, to be effective there needs to be clear policy direction on the distribution network transformation.⁶⁵</p>
<p>Unresolved debate on the future respective roles of AEMO vs DNSPs in managing two-way grid that allows integration of DER</p>	<p>Undertake a stand-back review of success and failure of DER to date and better understand whether there are impediments to needed investment.</p>	<p>A significant area of debate concerns the potential future respective roles of AEMO vs DNSPs in managing or orchestrating DER. While this has been considered through the Open Energy Network project, this is so far unresolved. This is causing uncertainty about roles and responsibilities.</p> <p>The resources available to AEMO in progressing this work exceed that of the rest of the industry combined.⁶⁶</p>
<p>Slow progress in implementation, a perception that there has been inadequate investment in DER to date</p>		<p>A top down review would focus on understanding whether there are impediments to needed investment.⁶⁷</p> <p>Networks are not incentivised to spend time on small scale demand issues.⁶⁸ There has been significant effort in recent years to advance</p>

⁶⁰ EDL Energy.

⁶¹ EPWA.

⁶² Uniting Communities, EDL,

⁶³ Farrierswier – this was not specially mentioned by any stakeholder but was implied by the concerns raised.

⁶⁴ <https://aemo.com.au/en/initiatives/major-programs/nem-distributed-energy-resources-der-program/markets-and-framework/open-energy-networks-joint-consultation-with-energy-networks-australia>

⁶⁵ Essential Energy.

⁶⁶ Essential Energy.

⁶⁷ Clean Energy Council.

⁶⁸ EDL Energy.

Concern	Proposed solution(s)	Feedback detail
		<p>DER, but progress has arguably been slower than is needed.⁶⁹</p> <p>The framework is not supporting investment at distribution level that targets dealing with system security and reliability. For example, AER's initial rejection of SA Power Networks proposed \$30m for network investment DER integration.⁷⁰</p> <p>There is not enough local investment into behind the meter services.⁷¹</p>
	<p>Consider whether Rule changes are required if inadequate DER investment is determined to be a problem.</p> <p>Can strengthened consumer engagement on DER investments assist?</p>	<p>Are the RIT-D and behind the meter Rule change tests appropriate and providing the right incentives / behaviours outcomes (i.e. for networks – culture change)?</p> <p>Is the AER supporting DER facilitation investment options for IT (i.e. allowing sufficient pass through of costs)?⁷²</p> <p>Are there unintended consequences of the original determinations? Have changing circumstances or new matters emerged?⁷³</p>
<p>More attention is required to future uncertainty</p>	<p>Develop scenarios for future market outcomes</p>	<p>It is impossible to accurately predict the future energy market in 5 to 10 years time given changes in technology and learning over time about what works.⁷⁴</p>
	<p>Give more priority to identifying non regrets actions that can then support businesses cases for necessary enabling investments to be undertaken in the short term.</p>	<p>Decision making to allow enabling investments is being delayed. Identifying non regret actions will help manage uncertainty while avoiding inefficient expenditure.⁷⁵</p>
	<p>More priority to trialling and pilots that enable practical experience and learning, with less focus on making the business case.</p>	<p>A need to create an environment and culture in which trials are embraced and mistakes / failures (that are bound to occur) are expected.⁷⁶</p>

⁶⁹ CEC.

⁷⁰ Essential Energy.

⁷¹ EDL Energy.

⁷² ECA, Uniting Communities.

⁷³ AEC, Uniting Communities.

⁷⁴ Uniting Communities, Essential Energy, ENA, EPWA, EDL Energy.

⁷⁵ Essential Energy, ERA, EPWA, AusGrid, Redback Technologies, Energy Australia.

⁷⁶ Essential Energy, ERA.

Concern	Proposed solution(s)	Feedback detail
Some potential DER solutions involve excessive complexity	Focus on the scope of services that consumers need from DER services, how are those services best provided (competitive versus regulated) and by who, and on what basis? ⁷⁷	Cost of batteries are declining and battery, storage could become a standard element of network technology and services. Need to reconsider existing services and roles in light of DER. For example, are battery services selling energy or time delayed distribution? ⁷⁸
	Reconsider the regulatory treatment of battery storage, including of ringfencing rules	Allowing easier use by networks of battery storage would reduce complexity required to manage the network compared to the current ringfencing rules where batteries services must be purchased on an arm's length basis.
	Moratorium on reform Rule changes for a period of time (12 to 24 months). ⁷⁹	
	Less focus on attempting to achieve perfect outcomes and instead on achieving more realistic good outcomes. ⁸⁰	
	Increase the attention to engagement with businesses and consumers.	

5.3 OTHER ISSUES

Other issues noted by stakeholders include:

- How should the DNSP interact with customers?⁸¹ For example, should DNSPs better communicate with customers on outages / faults, and / or have an enhanced relationship with customers, to enable the provision of services the customers want? Is a Rule change required to enable sharing of consumer information held by retailers to networks for certain activities?
- Tariff reform⁸² – is more required in the Rules to enable a move to more cost reflective tariff structures that drive change in behaviour, or more likely is it a political matter that a regulatory body (AEMC, or AER) can facilitate government understanding and policy support?
- Smart meters – it was suggested⁸³ that the roll out is far too slow – about a quarter of smart meters are now installed across the NEM. It was suggested that the expected full benefits from smart meters is not being achieved as planned even though we are five years down the track, and that DNSPs should

⁷⁷ Renew, CEC, Uniting Communities, ERA, EPWA, ENA, Redback Technologies.

⁷⁸ Renew, CEC, Uniting Communities, ENA, AusGrid, Sonnen Australia, Redback Technologies.

⁷⁹ Uniting Communities.

⁸⁰ Uniting Communities, EDL Energy, ENA, AusGrid.

⁸¹ AusGrid.

⁸² AusGrid, ECA.

⁸³ CEC, Essential Energy, ECA.

be making more use of smart meter data to deal with voltage issues and power quality issues. It was noted that the AEMC is to review at the end of this year.

6. Other

This section sets out other feedback received that did not clearly relate to NEL / NER issues, but which raises other policy or regulatory questions, or Rules interpretation questions.

Consider establishing a nationally consistent concessions framework

Currently, every state has a different approach to energy concessions. This makes it more costly for retailers to manage (for example, to respond to queries given many operate national call centres). There is no obvious benefit in the current wide variations in state-based concessions frameworks.

An option would be a nationally focused review⁸⁴ of current concessions frameworks to determine how they could be more consistent and efficient for retailers to administer. This appears to be an issue for the state government and the COAG Energy Council.

Consumer protections for new services

It was suggested that there was an emerging the issue of whether consumer protections will be required for new DER related services.

This appears to be a state government policy issue. Is there a role for national work on this issue?

National consistency for planning and local environmental controls for SAPS

It was suggested that the current state based planning and environmental approval arrangements for SAPS are problematic. There could benefit from greater consistency in planning and environmental approval across the states. For example, there may be benefit in a best practice guideline that states could draw on.

This appears to be a state government policy issue, or potentially an issue the Commonwealth or ARENA could lead.

The impact of climate change and network resilience

It was suggested that as a result of climate change, there will be increased days with very high temperatures, and more fire activity. This will create challenges for network resilience particularly in rural areas and changed expectations for networks to provide backup services when network services are disrupted. For example, Essential Energy noted that after the recent bushfire events, it was expected to provide backup generators to areas impacted by the bushfire events. The NSW Bushfire Inquiry⁸⁵ is expected to provide direction about networks future roles.

Questions that were raised included:

- What is a distribution network's role in providing resilience to such events?
- Do the Rules bind the AER to consider climate change impact?

⁸⁴ EDL Energy, ERA.

⁸⁵ NSW Bushfire Inquiry <https://www.nsw.gov.au/nsw-government/projects-and-initiatives/nsw-bushfire-inquiry>

The NSW Bushfire Inquiry has not reported. It is not clear whether this issue will raise the need for Rule changes; or whether it can be resolved with clear policy obligations being placed on businesses; or through effective consumer and stakeholder consultation.

The future impact of Electric Vehicles (EVs)

The likely transition to EVs in the longer term will have an impact on future service requirements, electricity demand and may provide benefits to the electricity system. There was limited discussion of this issue and the following points are not comprehensive.

It is currently unclear what the timing is for significant growth in EVs. However, Sonnen Australia considered that EVs could at some point start to grow very strongly. There would be great benefit in getting ahead of this growth to make sure that the full benefit of EVs to the electricity system was thought about and necessary actions (such as technical standards, battery capability and pricing arrangements) are implemented before this growth started.

It was also suggested that there is a risk that DER related services, particularly EVs and batteries, that would be better provided by the competitive market, are provided by a monopoly service provider as a regulated service.

The ERA raised concerns about demand forecasting risk and the ability for a regulator to approve forecast demand that contains assumptions on future market directions that are not supported by government policy. It might be in the long-term interests of consumers of a network investment proceeding to reflect expected future changes in generation and / or use of services such as network investment in country towns to enable EV charging stations. This will raise questions about substantiating the demand forecast and any government policy that underpins the forecast.

To address the concerns raised, government policy is required on EVs, which will determine the timing and extent of growth in EVs. Like DER services generally, work is required on scoping the services that consumers need from EVs, how are those services best provided and by who (competitive versus regulated), and on what basis (access and pricing)? Decisions will be required on:

- technical standards and battery capability decisions
- service definitions and pricing (including on charging stations services)
- metering.